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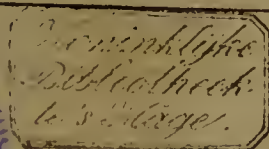
[By John - 1966.2]

A N
E A S Y W A Y
T O
P R O L O N G L I F E;

By a LITTLE ATTENTION to
What we Eat and Drink, and our
Manner of Living.

In TWO PARTS.

The FIFTH EDITION improved.



A N
E A S Y W A Y
T O
P R O L O N G L I F E .

PART I. CONTAINS

A CHEMICAL ANALYSIS; or, an ENQUIRY into
the NATURE and PROPERTIES of all kinds
of FOOD; how far they are wholesome, and
agree with different Constitutions.

WITH

Some Directions respecting our WAY
of LIVING.

PART II. CONTAINS

Many Salutary Observations, on EXERCISE,
REST, SLEEP, EVACUATION, &c.

Collected from the AUTHORITIES of some of our ablest
PHYSICIANS.

By a MEDICAL GENTLEMAN.

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L O N D O N .

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THE observations throughout these pages are not only supported by the authorities of some of our best Medical Writers, but are the result of experience and practice; and that reader who has sufficient resolution to pay a proper regard to the directions here given, will, in a very little time, congratulate himself for his discretion, and thank the Author for the benefit he has received from him. He presumes to advance nothing but what is undeniably true; and if he has not wrote like a physician, it is, because he wishes to be understood by all classes of people. He begs leave to say, that once reading this work is not enough: it should be perused again and again..

N. B. He has not given his authorities, because he would not break in upon the reader's attention. He is aware, that the doctrine will, of course, have it's enemies; but of that he is regardless.

A N
E A S Y W A Y
T O
P R O L O N G L I F E.

HEALTH being the greatest blessing upon earth, it is natural to imagine, we should be studious to preserve it; and yet, if we take a view of the actions and conduct of mankind in general, we are led to suppose that it is not the greatest good. Instead of paying any regard to it, we frequently indulge our appetites, at the expence of our constitutions. The human body is a piece of mechanism, that requires care and attention. It may be compared to clock-work, which, if not kept free from dust and other extraneous, injurious substances, will presently be out of order. Life is, generally speaking, shortened or prolonged, according to the care we take of it.

In the first age of the world, the life of man was nearly a thousand years; but after the flood,

it was abbreviated to half it's length. Three generations later, it was reduced to one fourth of it's original term, and man seldom lived above two hundred years. About the time of Moses, it became shorter still, commonly not exceeding one hundred and twenty years, and now, it is reduced to little more than half *that* period.

But, though we find this gradual declension in the several ages of the world ; yet we must understand, that it was not *equally* so in all parts, at the same time ; for difference of climate, and difference of living, caused a difference in the length of life. Hence, some of the inhabitants of the earth lived three times or four times as long as others.

Now, why the days of man should be thus shortened, and his term of life so much reduced, is an object worth our enquiry ; and, if we compare the manner of our living now, with that of the first age of the world, we shall see evident reasons for it ; every generation having, more and more, impaired it's constitution by a degenerate course of living, incompatible with the laws of nature. And as we must, of necessity, admit of hereditary infirmities, we have reason to expect, (unless by great reformation of the
inju-

injurious customs of later ages,) that life in future will be shorter still.

'Tis true, there is another rational cause, namely, that when the number of men upon the earth was small, it was necessary their life should be prolonged, for the purposes of population; but as they increased, this became no longer necessary, and the wisdom of the Creator found it requisite to shorten their days, lest the earth should be overstocked. For were men to live nine hundred years now, with the present increase of the species, there could not be provision for one tenth part of their number. But, notwithstanding this, it is a matter of melancholy consideration, to think, how much longer a man *might* live, with temperance, than he does at present; and how soon the gratification of a little momentary pleasure hurries him out of life, perhaps to the destruction of his family, and the loss of happiness hereafter.

In the infancy of the world, man sought only after the necessary requisites of his being, and was contented with that competent subsistence, which nature required; but, in process of time, he grew dissatisfied with the bare necessities of

life, (that wholesome provision that would have greatly prolonged it,) and hunted after variety and excess, to please and gratify a sensual appetite. Thus, one age taught another to be irregular and *disordered*, dictated new inventions to succeeding generations, and transmitted their ruined practices to the following ages to imitate and complete.

Hinc illæ lachrymæ !—After this manner, and by such means, is the life of man beset by innumerable infirmities and diseases: thus, is he cut off, before he is well aware of it.

Now, as it is natural for man to covet length of life, we have reason to suppose, he will be glad to pay some attention to those things, that will either prolong or shorten it; and, as length of life depends upon health, health is the principal thing to be considered.

The practice of physic was anciently distributed into three branches; the first of which was confined to surgery; the second, to the administration of internal remedies; the last, to a due regulation of diet. The two former have, in no age, received more useful improvement than in the present. But, it is greatly to be doubted, whether

whether or not an attention has been paid to the latter, in proportion to it's dignity and importance.

Many are the causes of ill health, but the principal one is variety and excess of food. To this then, at present, we shall turn our enquiries. But, before we proceed, it may not be unnecessary to give the reader some little insight into the nature of digestion and the properties of food in general.

When food is thrown down into a healthy stomach, it naturally dissolves and ferments, it being a natural property of the stomach to produce fermentation. The aliment being dissolved and fermented, is again rendered solid by the juices of the stomach ; and the nutritive fluid being expelled from the solid part, is passed into the intestines, where it is absorbed by certain vessels that open into them, and converted into blood. The remaining part of the food, being retained in the stomach, during this process, is afterwards evacuated. But this fermentation in the body is not exactly similar to fermentations out of the body ; as, in fermentations out of the body, the air contained in the substances fermenting is let out, which may be found by experiment ; but,
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this is not the case in healthy persons and in proper food, within the body ; fermentation there takes place without any extrication of air. In weak stomachs, indeed, and in the digesting of some particular foods, extrication of air will often so distend the stomach, as to occasion flatulencies and pain ; but this is always irregular and unnatural.

Now, if such extrication of air should happen, or the food we take be such as will not, in the stomach, readily dissolve, ferment, become solid, or re-dissolve ; or, in short, if it be such as shall, in any way, resist the powers of the stomach, digestion will be imperfect, and the whole system disordered ; it being only such part of the food as is digested, that nourishes the body.

If the digestive powers of the stomach be weak, natural fermentation will not take place, but such fermentation as we observe in flour, when mixt with yeast, that is, the air in the substances we eat will be extricated ; and sometimes to such a degree as to distend the stomach greatly, and bring on, what is called wind, belchings and pain. In this case vegetables will turn acid, and meat will putrify, before either of them are passed from the stomach. This occasions heart-burn, a certain sign of indigestion ; and, if this weakness of the stomach

mach continues, and putrefaction runs to a great height; sickness, vomiting, and purging will be the consequence, and sometimes fever. Now, should any quantity of this putrid food be absorbed by the vessels, and, in its passage through the body, be carried into the blood, it will weaken the whole system, and, if not timely prevented, bring on such a general putrefaction of the blood, &c. as to prove fatal.

If what we eat, be of hard digestion, that is, such as will not readily dissolve, break down, or ferment in the stomach, either owing to the nature of the food, its hard texture, or the weakness of our digestive organs, it will remain too long, before it be passed off, and produce a sense of weight, fullness, oppression and cold; as is the case with salted meats in weak stomachs. 'Tis the same, if it will not re-dissolve, after it is coagulated or become solid.

So again, if it be too easy of digestion; that is, if it be such as will not remain long enough in the stomach, owing either to its want of tendency to become solid again after it is dissolved; or to the strength of the stomach preventing it, the nutritive part will not have time to separate, and the body will not be nourished.

Further,

Further, it must be observed that circulation is carried on by a contraction of the heart, driving the blood from its cavities into the blood-vessels, which, immediately on receiving it, contract likewise, and impel it on, through the whole round of the system, to the heart again. Now, if the heart and vessels contract too quick, or with too much force, it occasions a strong, quick pulse and fever, and will often throw the blood in such quantities upon the brain, which is a tender, delicate part, as to bring on Stupor, Apoplexy, Delirium, and Death : and, it is the property of some substances to stimulate or encrease this action of the heart and vessels ; and of others, to diminish it. Food of a viscid, clammy nature, glary, like the white of an egg, will adhere to the sides of the stomach, and, by so doing, throw the blood, from other parts of the body, in such quantities upon the brain, as to oppress it, and sometimes occasion Apoplexy. How this is brought about, is unknown ; but experience shews us that it is so.

Persons have been so disordered by eating muscles, which are of a viscid nature, that, without some timely assistance, they would have died. In these cases, the head swells, the face becomes of a black red, the eyes are ready to start from
their

their sockets, and a Stupor succeeds; but by administering a vomit, making the stomach discharge it's contents, and by opening the jugular vein, the patient has sometimes recovered.

From hence it appears, that some kinds of food are wholesome, others unwholesome, and that there is none universally proper. It must be adapted to the constitution.

Now, there is a period in the life of man, in which the organs of digestion are weak, and yet, at the same time, there is a necessity for much nourishment. This period is infancy; for, as at this time, the body increases fast, much nourishment is required to help and forward the growth: milk being naturally provided, and therefore probably adapted to it, we may suppose it to be a food of easy digestion and considerable nourishment. Examining then the properties of milk, will give us some insight into the nature of food in general.

Milk is not a simple substance; it is a mixture of three; namely, coagulable matter, expressed oil, and sugar. Coagulable matter is that which will unite, and become solid, leaving the rest thinner and more fluid, *viz.* the curd; and expressed oil
is

is such as can be procured from any substance by pressing, as oil of almonds, olives, and the like : by expressed oil, in milk, we understand the cream.

The most simple food, then, does not appear to be the easiest of digestion ; if it was, we should have expected that milk would have consisted of one substance only.

That the coagulable matter is capable of affording considerable nourishment, may be gathered from our experiencing that animal mucilage nourishes the most ; mucilage being that substance which has sufficient moisture to keep it together : as, for example,—found, good meat.

This coagulable matter, in milk, is fluid indeed when taken, but there is a juice peculiar to the stomach, very different from an acid, that renders it solid. We find the stomach of a calf, though cleared of every thing that is acid, to have this property. An infusion of a few grains of the inner coat will coagulate or curdle several quarts of milk.

With respect to cheese, for we shall not have a better opportunity to mention it, it has, in general, a costive quality ; but it differs, in proportion to
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the quantity of oil, in the coagulable part. The more rich, and oily parts there are in cheese, the more nutritive it is and soluble : that is, the readier it will digest ; the leaner the cheese, the more difficultly it digests. Cheese is liable to become rank and putrid, we must then consider it as having all the effects of animal food, when advanced to putrefaction ; at this time it ceases to be nutritive, and can only be considered as an assistant to digestion. Cheese, indeed, as food, is only fit for the laborious and robust.

Having mentioned cheese, let us say a word or two upon butter. A quantity of pure cream eaten, is undoubtedly unwholesome ; being, from its disposition to get acid and rancid, very difficult of digestion ; but, in the form of butter, it may be used with advantage. 'Tis a strong nutriment, fit to accompany our vegetable diet, especially such vegetables as are naturally dry of themselves ; in this case, it gives them the properties of rich, oily substances.—But, to return,

It appears then that milk, and, of course all other food, must become solid in the stomach, and, after that, undergo a fresh change, that is, be redissolved, for digestion ; for which purpose, it must remain some time there, before it be passed off.

Now,

Now, that the expressed oil, which is the cream, helps digestion, is evident from milk's not digesting so well when it has been skimmed, the curd being harder ; for the cream and the sugar, being mixed with the curd, separate the different parts of it more from one another, so that the natural fluid of the stomach will penetrate the easier, and fermentation go on the better*. And as to sugar, it, being from it's nature more apt to ferment, will of course facilitate digestion.

That expressed oil affords much nourishment, we find from men and animals being able to live a long time upon nuts, almonds, &c. such containing a quantity of this oil. But, expressed oil alone produces sense of weight in the stomach, owing to a relaxation it brings on, preventing the stomach's contracting and expelling it's load, and if taken in quantities, it will bring on sickness.

That sugar also affords great nourishment, is evident from animals thriving on the shoots of young plants, which contain a great deal of sugar ; and from some negroes living wholly on the sugar-cane. But sugar alone is viscid, and, by adhering to the sides of the stomach, will stimulate

* If new milk is too rich or heavy for a child's stomach, let it be diluted or mixed with water ; it should never be skimmed.

it and disorder the system, and if diluted with any watry fluid, would be so thin as not to be retained in the stomach long enough for digestion, but mixed with the coagulable part of the milk, it is sufficiently retained. Either of these substances alone then, *viz.* coagulable matter, expressed oil, or sugar, would be *hard* of digestion; but blended, as in milk, they are *easy* of digestion.

Immediately after child-birth, when the milk begins to flow in the mother's breasts, it contains a larger quantity of sugar and water, (for there is always a small quantity of water) in proportion to the coagulable matter. Some months after child-birth, the coagulable matter encreases, and the sugar proportionably diminishes. For as the infant-stomach is weak, the solid part of the milk is at first less, so that a looser mass is formed, much easier to be dissolved. As the child grows stronger, it's stomach can bear more of this coagulable matter, and digests it, if it be firmer. This points out, that a young child, one of a month old, will not thrive, in general, on breast-milk eight or nine months old.

We also learn from this, that weak stomachs require food of easy digestion; strong stomachs, food of harder digestion. Thus, chicken, &c. will

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nourish

nourish people most, recovering from sickness, and bacon, &c. will best recruit a labourer.

Having thus far considered the properties of milk, the food Nature has designed for the infant-stomach, we shall be able to discover the wholesomeness of other foods, by examining *their* different properties; and we will begin with vegetables.

The vegetable substances capable of nourishing are as follow:

1. Farinaceous matter, or flour. This is generally contained in grain; but sometimes we find it in the stems of plants, and sometimes in their roots.

2. Vegetable mucilage: as for example, gum-arabic, &c. That this is capable of nourishing, is evident from whole caravans living on it, for a long time, when they can procure no other food.

3. Sugar.

4. Expressed oils. And,

5. Native vegetable acid; or the juice of sour fruits, which tends to take off the putrescency of animal food: that is, to prevent meat from corrupting, whilst it continues in the stomach. For

For animal food, without a mixture of vegetable, is apt to continue too long in the stomach, before it ferments. In this case, it will sometimes begin to putrify before it be passed off, which putrefaction getting into the blood, will often bring on a putrefaction of all the fluids of the body. This is a compleat sea-scurvy, which, if not timely remedied, always terminates dreadfully. Salting provisions makes them harder of digestion; and, though it prevents meat from corrupting soon out of the body; yet, as the salt seldom, if ever, penetrates sufficiently into the substance of the meat, so as totally to secure it against putrefaction, when in the body; if it is not immediately made to ferment, by the addition of vegetable food, or some vegetable acid thrown in with it, it will be apt to putrify before it digests, and contaminate the whole system. Hence we see, how liable mariners are, on a voyage, where there is a scarcity of vegetables, to be afflicted with the scurvy, and how soon they get rid of that disorder, when they once get on shore again, to the free use of herbs and roots.

Now, these five vegetable substances, we have mentioned, go naturally through fermentation, and are converted into blood.

With respect to the fibres, the solid part of vegetables, we find them frequently pass through the body, without being altered. As for example, peas and the skins of gooseberries, currants, &c. Now, as the texture of the strongest tendons of animal food is constantly destroyed in their passage through the body, while such parts of vegetable food shall be evacuated as they are taken in, it is a question whether these last are digested? If any of them are, it must be such only as are young and tender.

But to return. Farinaceous matter is contained in the seeds of all vegetables; but in many, it is so mixed with other substances, as to be unfit for use. Thus, we find it in peas, beans, &c. but in too small quantities for the purposes of life.

So again, we meet with it in nuts; as walnuts, chestnuts, almonds, filberds, common nuts, &c. But these contain too much oil to be wholesome for common food. Besides, they yield a bitterish, astringent matter, which adds to their unwholesomeness. Bitter almonds, acorns, &c. which contain a great deal of this matter, are more unwholesome still. The oil, contained in nuts, will often give a sense of weight in the stomach,

stomach, and stimulate the system during digestion, especially when eaten raw. Besides, the farinaceous matter in them has a viscosity that renders them hurtful to the constitution; but roasting them will destroy this viscosity, and then they may be eaten safely, and will afford much nourishment. They may be rendered easier of digestion, by mixing them with flour. 'Tis the cocoa-nut, mixed with flour, that forms chocolate.

Farinaceous matter is found also in many roots, as in potatoes, &c. and sometimes in the pith of trees, as in the palm-tree.

We use the pith of one tree, which we make into sago, by moistening it with water, beating it up, so as to separate it from the fibrous part of the tree, drying it into a cake, and afterwards reducing it to powder. Thus, it becomes easy of digestion, and does not stimulate; but, still, as it passes off too soon from the stomach, it does not afford much nourishment. However, it is very proper food for weak stomachs, as in fevers.

In the East, they eat rice; in England, wheat; in Germany, rye; in some parts, oats and barley; and in Africa, Indian wheat. This is

the grain commonly used for food, and it appears to be well adapted to digestion:

Farrinaceous matter is, in it's nature, solid, capable of being dissolved in water, and forming a jelly. If, before we dissolve it in water, we expose it to heat, it coagulates or becomes solid; thus, if we bake it, we convert it into bread; after which, it will not so readily dissolve. But bread dissolved by long boiling, is less viscid than a solution of flour would be; and consequently more wholesome. Was flour used, with water, raw, it would be so viscid as to clog and cloy the stomach; we therefore prepare it to take off this viscosity.

Flour is not apt to undergo that fermentation in the stomach, so as sufficiently to correct the putrescency of animal food; we therefore ferment it first; that is, we make it into bread. Another reason for our converting it into bread, is, that in fermentation, extrication of air takes place, which leaves a number of holes, making the bread spongy; by which means, when eaten, it soaks up the fluid of the stomach and facilitates digestion.

In order to coagulate the flour, that is, make
it

it into bread, and give it a whiteness, which is the nature of all coagulants to do, bakers mix with it a quantity of allum, which, if not so great as to give the bread a taste, can do no harm to adults; but a small quantity will do much mischief to infants. Panada, therefore, for children, should by no means be made of bread in which any allum has been mixed. It is for this reason physicians prescribe biscuit-powder.

Sometimes bakers use whites of eggs, and sometimes spirits of wine, to coagulate the flour, as in French bread; the first is innocent, and the last evaporates during the baking, and can produce no ill effect. For if bread is not perfectly coagulated, it will sometimes ferment a second time in the stomach, particularly if it continues long, as in weak stomachs, and turn sour; but baking it a second time will totally prevent this. Thus, rusks and toasted bread are often prescribed for disordered stomachs, as being least liable to do mischief; for the least extrication of air in weak stomachs is injurious.

But farrinaceous seeds and roots are not sufficient to correct the putrescency of meat; we therefore make use of vegetables, that were not

originally designed for food, namely, pot-herbs. Of these,

The one sort are cabbages, cauliflowers, brocoli, and all the varieties of this class of plants. They contain naturally a stimulating oil, and a bitter astringent juice, so as not to be fit for use; but we find this only in wild cabbages, &c. By cultivation, this oil and bitter juice are destroyed, and such as grow in our gardens consist of little more than mucilage and sugar; and, of course are fit for food.

The method taken to destroy these noxious juices, is, to grow the plants in the dark, or, with as little air as possible; this is done by planting them in a rich soil, and thus making them so luxuriant, that the leaves shall embrace one another; by which means the body of the plant grows in the dark, and with little or no air. Hence the inner leaves become white, and are free from those hurtful juices. The outer leaves may be eaten, but the inner ones are most wholesome. So young plants are more wholesome than old ones, as whatever of these juices they contain, they are not near so rank.

Another kind of plants we use, is parsley,
fennel,

fennel, thyme, mint, sage, &c. and some others of the same kind. These contain a stimulating oil that would be injurious to the constitution, if eaten in any quantity; and, on that account are only used as condiments with a seasoning to other foods. Cellery is of the same kind; but, by earthing it up, and thus making it grow in the dark, and with little or no air, we destroy its noxious oil. Wild cellery, if eaten, will blister the mouth.

The several species of onions, garlick, shalots, &c. are of another class; we cannot destroy the oil in these, but by boiling.

Lettuce, endive, dandelion, &c. contain much opium, and when wild are very bitter and dispose to sleep, consequently are unfit for food; but by cultivating them in rich soils, and covering them from light and air, by tying them up, we render them wholesome.

Spinage, beets and other plants of that kind, when wild, contain also a very bitter oil, so as not to be eatable; but, by cultivation in rich soils they lose this oil.

In the same manner asparagus contains oil so stimulating,

stimulating, that, if eaten wild, would blister the tongue; but, by cultivating it in rich ground and making use only of the young shoots, we avoid this inconvenience: but we shall take occasion to mention this and every other article more fully hereafter.

None of these plants alone afford much nourishment; we use them to correct the putrescency of animal food, and particularly in the summer, as not stimulating.

They are apt to ferment, and turn sour in a weak stomach, and in fermenting, will let loose the air contained in them, and occasion wind: when persons find this, they should refrain from eating them, till the stomach grows stronger; for, by continuing to take down such things as disagree with them, they not only disorder themselves for the present, but will, in time, so injure their digestive organs, as to be hereafter attended with dreadful consequences.

Peas, beans, kidney-beans, &c. are more flatulent or windy still; especially, when eaten unripe, as is always done: such persons therefore with whom they disagree, should by no means eat them.

With

With respect to esculent roots; these contain mucilage, sugar, and farrinaceous matter, that is, flour. The last two afford much nourishment, but the mucilage does little else than forward fermentation. The more mucilaginous and watery these roots are, the more apt they are to ferment and correct the putrescency of animal food, and consequently the fitter to be eaten in warm weather. But the more sugar and flour they contain, the more they nourish.

Turnips, radishes, onions, &c. are equally as liable to ferment and correct putrescency, as the herbs springing from these roots; and as they contain a greater quantity of sugar than their respective herbs, they are more nutritive.

Carrots, parsneps, artichokes, Jerusalem artichokes, &c. contain much sugar and farrinaceous matter, but very little mucilage. These are wholesome, nutritive, and easy of digestion.

The sugar adds much to the nutritive quality of the farrinaceous matter in all these substances.

Potatoes, yams, earth-nuts, &c. contain flour almost alone, with very little sugar, but more water than we find in farrinaceous seeds. However,

ever, the farrinaceous matter is the same in both, and is coagulable by heat. We boil them and roast them, to destroy their visciditv.

It was but lately that these roots were introduced into Europe for food. They are as nutritive as wheat-flour, but cannot be so well made into bread without a mixture of flour, as they will not readily ferment without some such mixture. One reason for our not growing them so generally as wheat, is, that they are more apt to fail in the produce. The crop is not equally certain.

It is not yet determined, whether mushrooms are animals or vegetables. They have all the properties of animal food, and must be considered as such.

F R U I T S.

FRUITS contain sugar, native vegetable acid, and mucilage; and their skins contain more or less an astringent juice; but so little of it, as not to render them unwholesome. Nay, it is rather of service, as it stimulates the stomach, causes it to contract strongly, and thus prevents the fruit becoming acid and flatulent. The
sugar,

sugar, acids and mucilage are capable of fermenting and being converted into blood. As sugar affords more nourishment than any other substance, such fruits as are sweetest are the most wholesome, *viz.* figs, grapes, &c.

Sugar is even more nutritive than flour, but it is seldom thoroughly digested; being so very soluble, it passes off from the stomach before any change can take place in it, but entangled in the cells of fruit, it is retained longer in the stomach, so as to yield some nourishment. So again, it is not apt to ferment in the stomach alone, but mixed with the mucilage of fruits, fermentation readily takes place. Besides, the acid of fruits helps to correct the putrescency of animal food.

The more diluted sugar is, the more apt it is to ferment. Hence, watry or mucilaginous fruits, with little sugar, as gooseberries, currants, cherries, &c. afford but little nourishment, but then they tend more to correct putrescency.

Such as contain more sugar and less water and mucilage, are not so apt to ferment, consequently are not so proper to correct putrescency; but then they are more nutritive than such as
contain

contain more mucilage and water, and less sugar. They afford so much nourishment, that in many countries they are used as food: thus, figs, dates, &c. in Portugal, are eaten as common food.

By evaporating the water from spirits, that is by drying them, we lessen their disposition to ferment, consequently, we make them less flatulent and more nutritive.

The fermentation of some fruits in the stomach, have, by letting loose the air, sometimes so distended it, as to prove fatal; but we may correct this by adding sugar to them or spices. However, such as find they disagree with them, if they value their health, should refrain from eating them,

Fruits containing a great quantity of native vegetable acid, afford so little nourishment, (as lemons, oranges, &c.) that we seldom use them, but as a power acting on the stomach, to correct the bad properties of other food; as will be shewn hereafter.

Sour fruits, eaten in autumn, have been accused of bringing on violent continued purgings, but without any reason. Indeed, some sour
fruits

fruits will act as purgatives, and the purging shall continue; but this must be owing to the state of the body, predisposed to purge; for, we find, that when fruit purges a body, not predisposed to purge, no purging continues when the fruit is evacuated. In hot summers, when there is great plenty of fruit, dysenteries or continued purgings are apt to be general, but this is owing to the heat of the weather; for persons will be afflicted with dysentery, who eat no fruit. In short, in such disorders they counteract; and those who eat no fruit, are more apt to purge, than such as do. Nay, if large quantities of fruit should purge, it will not prove dangerous; it will act no further than as a dose of physic.

There is one species of fruit very different from others, namely, cucumbers, melons, &c. This fruit, either ripe or unripe, contains a great deal of mucilage of a particular kind. Break them in two, and you will see much of this mucilage ooze out, so as to glue the two parts firmly together. Now, this mucilage prevents the other parts of the fruit from fermenting, consequently causes indigestion, and brings on in the stomach a sense of weight, coldness and sickness; for though the substance be soft, it will not readily dissolve

dissolve. Cucumbers have been known to lie in the stomach three days undigested. We are led to use them in the summer as cooling food; but they are very injurious to the constitution. Besides, they contain a quantity of essential oil (which no other vegetable substance does,) very disagreeable and hurtful to a weak stomach. If they are eaten, therefore, it should be with oil and pepper, as correctors of their noxious qualities. There is a natural bitter in the skin of the cucumber that will serve to digest it, if eaten at the same time; but this should only be done when the cucumber is young, as it afterwards becomes injurious to the stomach.

Having now treated of the properties and wholesomeness of vegetable food, we will proceed next to animal; and herein we will first consider the propriety of using it.

It has been given as a reason for not using animal food, that it was inconsistent with humanity. There can, however, be little difficulty about this, as there are a great number of animals that must live on animal food wholly, not being able to eat vegetable. It was therefore the intention of the Creator, that animal food should be eaten. All that is to be considered,

sidered, is, whether man is that animal that is destined to live upon animal food. The Pythagorean doctrine, heightened by superstition, has been a means of making numbers of people, *viz.* the whole of the Gentoos, the whole empire of Hindostan, and part of China, larger together than France, Spain, Italy, and England, wholly abstain from meat.

It is also to be observed, that the race of particular animals is seldom diminished, though we destroy many of them; the increase of animals being much below what *might* be propagated. One man, and one woman might, in the nature of things, have thirty children; but, in general, they may have ten; five boys and five girls. At every generation, then, were men propagated to the utmost, they would increase in number five times; so that, in a very short time, a nation must become exceedingly populous. It is the difficulty of procuring food, and obtaining the necessaries and conveniences of life that prevents this propagation: a proof of the superintendency of Providence. Now, as it is in man, so is it in other animals. It is possible for a sow to bring forth ten pigs at every litter; so that were this species propagated to the utmost, in a few years, the increase would be prodigious. Ten-
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fold in one year, and a thousand-fold in ten years. Here also the difficulty of obtaining food prevents increase; there being always a desire of propagation between the sexes.

This is more evident, if we observe the great increase of rats in a granary, where they multiply in proportion to the quantity of corn there lodged.

These things considered, we may readily see, that in destroying annually a number of any one species of animals; so far from diminishing that species, we shall rather increase it, as in such a case, we shall be anxious so to do. So, by sending a number of inhabitants out of a country, we do not depopulate that country, unless we exceed a certain bounds. Animals then living on one another, is the means of increasing animal life considerably: there can be, therefore, no reason why animal food should not be used. Let us examine, then, whether this food be proper.

Most quadrupeds are confined naturally to particular climates, and most of them, in their organs of digestion, fitted for animal and vegetable food. Some have it only in their power to obtain animal food, and some only vegetable; but man
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seems destined to cover the whole face of the earth; no climate being yet discovered unfit for *his* residence. His powers are fitted for animal as well as vegetable food, and his digestive organs equally adapted to both. And, if we consider mankind in their most simple state, where they are most guided by instinct; we find as many shepherds and hunters living on animal food, as husbandmen living on vegetable.

Animals destined to live on animal food, have their intestinal canal shorter than such as live on vegetable food. That is (in order to be understood by such as are unacquainted with physical terms,) have less length of gut. And as longer retention in the stomach is required for animal food than for vegetable, and man's digestive organs are adapted to this; it appears, that man is destined to live equally on animal food, as vegetable. Further; the teeth of man are a medium between the teeth of carnivorous animals, and those of graminivorous. Besides, his health is better supported by a mixture of the two, than it would be, was he to live upon one. The Laplanders, indeed, live nine months on rein-deer, and the Greenlanders live upon fish: it is possible, therefore, to live on animal food alone, How-

ever, were we obliged to live upon one sort wholly, it would be best to live on vegetable ; for animal food alone, would frequently bring on diseases ; a mixture therefore is best. In short, man is endowed with greater variety in his system and constitution than any other animal, he being destined to live in all parts of the earth.

Let us next consider the differences between animal and vegetable food. Now, as we said before, fermentation which takes place in food, within the stomach, is different from that which takes place out of it. If the stomach then be weak, so as not to bring on fermentation natural to it, the fermentation that would take place out of the stomach, will take place in it. Hence it is, that in weak stomachs, food turns acid and putrid. This first occasions heart-burn, a sure sign of a weak stomach ; and if the putrefaction should run to a great height, the consequence is sickness, vomiting, purging, and, sometimes fever. And should a small quantity of such putrified matter, as was observed before, be absorbed by the vessels, in its passage through the body, it will depress the strength, and without a timely remedy, cause a general putrefaction of the fluids through the whole system. Thus the
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mischiefs of animal food, putrifying, are greater and more dangerous than such as arise from undigested vegetable food, as this turns sour only.

Another difference is this. Vegetable food, during digestion, stimulates less. When the stomach is distended with food, the whole system, during digestion, is more or less stimulated; but more so with animal food than with vegetable. Now, the more our system is stimulated, the quicker is the circulation, and the more feverish we become.

As animal food fills the blood-vessels fuller with blood than vegetable, it naturally increases our muscular strength; but then it loads the brain, (every part being fuller of blood in proportion) and occasions heaviness and stupor: whereas, vegetable food, from not loading the system with blood, rather diminishes muscular strength, but enables the mind to act with greater force. Vegetable food, therefore, is fitter to give clearness of ideas; and animal food is best adapted to labour. A physical demonstration might be given of this; but, to a general reader it would be idle. However, habit has a great effect in this case. Man, accustomed to labour, and to

eat vegetable food, (as are the porters of Constantinople) may be capable of great muscular exertion ; but this does not prove the power of vegetable food over animal. So a horse fed on grafs, and kept in exercise, will be better able to work, than one fed on hay and corn for twelve months together, without exercise : but this neither is any proof.

The next thing to be considered is, a maxim generally laid down by all authors on this subject ; namely, that simplicity of food is more conducive to health than a variety : but experience teaches us the contrary. Milk, as we before observed, which affords great nourishment, is a mixture of three nutritive substances ; and we may venture to affirm, that if an alderman was to eat as much of beef-steaks, as he does of other things, at a city-feast, he would bring on sickness and vomiting. Put variety of grain before a hen, and she will eat of that she likes best ; but, before the day is out, she will eat of the other. Instinct leads her to this, as most conducive to her health.

Almost all food contains oil, and the stomach can better bear a variety of this oil, than a quantity of one particular sort. Besides, animal and
vege-

vegetable food correct the ill qualities of one another. Animal food corrects the flatulency of vegetable; and vegetable food, the putrescency of animal. Indeed, a mixture of some foods will disagree, as fish and milk; fish coagulating milk too firmly for easy digestion; but there is no rule without an exception.

The mischief of variety of food is it's tempting us to eat too much: but, if we avoid eating too much, variety is best, provided that variety consists of things easy of digestion.

But the most singular and curious circumstance, with respect to food, is this. The powers of digestion are adapted to the want of blood in the blood-vessels. If they are not sufficiently full for the purposes of health, the appetite is great, digestion is strong, and much blood is formed; but if they are full enough, there is no appetite, digestion is weak, and no blood is formed. For, let a man swallow as much food as he can, without an appetite, though he is able to digest it, it will not be converted into blood. So watchful is Nature of her health.

Eating too much food, in general, for a length of time does harm. It weakens the organs of
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digestion, debilitates the constitution, and wears it out. Hence arise gout, apoplexy, and all the diseases attendant on old age. In disease, men, eating too much, never escape with impunity.

We shall now proceed to the properties of the different kinds of animal food. There are two substances in meat, capable of nourishing ; mucilage and expressed oil.

Animal mucilages differ much from one another ; but considered as food, they do not. The only difference of consequence is, as far as depends upon their texture. When the fibres of an animal are large, they are not easily dissolved ; of course, they are difficult of digestion. Beef is, on this account, more difficult of digestion than mutton ; the fibres of the one being larger than those of the other. On the same principle, when food is coagulated firmly, it is also difficult of digestion. The firmer the coagulum, that is, the less fluid it contains, the more difficult it will be of digestion. Animal food, whose fibres have but little fluid between them, that is, dry meat, is more indigestible than moist. Thus, lean animals are harder of digestion than fat ones ; and the lean part of fat meat is easier of digestion than the lean part of lean meat. By the same way of
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reasoning, meat roasted or boiled a great deal, is not so digestible, as when roasted or boiled but little ; for when the fluids are expelled by heat, the fibres approach closer to each other, and, when in the stomach, will not admit the juice of the stomach so readily to penetrate it ; consequently, fermentation will not take place so soon.

The readier animal food dissolves in water, the more digestible it is. A flounder boiled in an equal quantity of water, is sooner dissolved than mutton ; therefore, flounders are easier of digestion than mutton ; the juice of the stomach being little else than warm water, helped by fermentation. But fish, though readily soluble in water, has a property in it that renders it indigestible, which is a certain glariness or viscosity ; but when the stomach is strong enough to digest it, it is easier of digestion than either flesh or fowl.

Meat apt to putrify, is sooner digested, than such as is not. Pidgeon will putrify sooner than duck : of course, pidgeon is easier of digestion than duck. Now, as the fluids in animal food tend to hasten putrefaction, by depriving it of those fluids, by long boiling or roasting, we render it harder of digestion. By boiling meat till
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it be free from gravy, we can keep it from corrupting for six months. A further proof that meat much dressed, is less wholesome than such as is little dressed. Such meats, however, as putrify the soonest, are injurious to weak stomachs, as this putrescency stimulates during the time of digestion.

It is with a view of rendering meat easier of digestion, that we keep it sometime after it is killed, before we eat it. As soon as meat is killed, it begins to putrify ; and putrefaction is the most effectual breaker-down of animal substance, and a great assistant to solution, which is the immediate forerunner of digestion. But the length of time meat ought to be kept, should be proportioned to it's tendency to putrify, and the heat of the weather. It is eaten, for example, much sooner in summer than in winter.

But the property in which meats differ most, is their viscosity or glariness. Such as are viscid, adhere to the sides of the stomach, and stimulate much. In quadrupeds, young animals have this property, such as veal, pig, fawn, and lamb ; but in a smaller degree. Young birds have the same bad property, and all fish, in a great degree ; particularly

ticularly shell-fish, which, on this account, has often proved poisonous and fatal to many. When these have proved fatal, it has been ascribed to the copper vessel in which they were dressed; but a little observation would shew the contrary. When persons lose their lives by the ill effects of copper; sickness, vomiting, and purging take place: but when poisoned by shell-fish, the head swells, the breast is oppressed, and stupor is the consequence.

Animal food dissolved in water, forms a gelatinous solution or jelly, which is of a viscid nature, and, in some degree, produces the same effect as viscid foods. It stimulates, but does not yield much nourishment. At the same time, it is difficult of digestion, and of course, improper to be taken by diseased or weak stomachs. Jellies, though long prescribed to strengthen the system after a fever, have lately been found prejudicial, and the use of them are therefore exploded.

Essential oils, inherent in some animal food, render it difficult of digestion. The essential oils of vegetables are often agreeable to the stomach, and stimulate it so as to forward digestion; but those of animal food, though agreeable to the taste, are injurious. Pork, geese, ducks, salmon,
 &c.

&c. contain much of this oil, and are of course, high-flavoured. They may be agreeable to the taste of strong stomachs, but if eaten in too great quantities, or if the stomach be too weak, they will disagree with it, and have the same effect with viscosity; that is, they will stimulate the system, and sometimes bring on a fever. Animal food, then, that is viscid, that contains much essential oil, or will not readily dissolve, is apt to remain too long in the stomach, and do harm. But that which will readily putrify and dissolve, is retained but a short time in the stomach; and is, of course, easily digested: for digestion depending on the contraction of the stomach, if the stomach be so disordered as to lose any of its contractile powers, either by the oil or viscosity of the food, the food will be retained too long in it.

We seldom use animal food without some preparation. These preparations are either exposing it to such heat as will coagulate the solids and fluids, or after such coagulation, dissolving it in water. By coagulating any animal solid, we take off that viscosity which almost all have; when raw, and the stomach consequently bears it much better. Thus we can digest twice the quantity of oysters roasted, that we can raw.

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In coagulating animal substances by heat, we often expose them to a great fire, as in roasting; which coagulates the outer parts, forming a crust, as it were, round the inward fluids, and retaining them. This gives them an empyreumatic oil, offensive to the smell. In boiling, we avoid this empyreumatic oil, but then we take out the essential oil. In frying, we retain both oils, so that fried meat is more difficult of digestion than either roasted or boiled.

Chicken, partridges, veal, &c. are more wholesome when roasted, than boiled. Mutton, beef, pork, &c. are easier digested when boiled.

All quadrupeds that feed on vegetables are used, somewhere or other, for food; such as the ox, the sheep, the deer, the goat, the hog, the hare, &c. In some countries, horses are eaten; in others, squirrels, rats and mice. Animals that live on animal food alone, are seldom eaten; as the lion, the cat, the tyger, &c. Few make use of dogs, or any animals of that class; those who do, feed them on vegetables; such animals as live on animal food alone, being, on account of their putrescency, and of the great quantity of essential oil contained in them, both disagreeable to the stomach, and difficult of digestion.

Birds

Birds also are made use of for food, except birds of prey; that is, such as live on other birds; and we except them, for the same reasons that we do beasts of prey. We prefer such as live on insects to such as feed on fish, because they are tenderer; such as live on fish acquiring a toughness.

All fish have been eaten, and all shell-fish which have sufficient muscular flesh to render them worth eating.

Those birds that are not very putrescent in their nature, and are most free from essential oil, are the easiest of digestion. As for example, moor-game, poultry, partridges, pheasants, &c. and of quadrupeds, the deer, the sheep, the ox, &c. The older animals of this class are easier of digestion than the younger ones. Mutton, for instance, is easier of digestion than lamb; beef than veal; venison than fawn; and that on account of the visciduity of the flesh of young animals. Fish is more difficult of digestion than flesh, especially in weak stomachs. And of fish, those that have least flavour, that is, such as have least essential oil in them, are white, and have some degree of firmness, will digest much sooner than
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such as are of stronger flavour. Flounders, whittings, &c. are easier of digestion than salmon, soals, &c.

But still, quadrupeds afford more nourishment than either birds or fish; and those animals of stronger flavour, *viz.* pork, geese, duck, salmon, &c. afford more nourishment and are fitter for such as labour or take a great deal of exercise, than animals of the same class, that are easier of digestion.

Now, to correct the ill qualities of the different kinds of food, and to assist digestion, we make use of a variety of things, such as are called the decoraments of the table; which in themselves afford little or no nourishment. These are spices, acids, salt, oil, and sugar.

Spices act as stimulants. It must here be recollected, that digestion depends upon the contractile power of the stomach, it being that which prevents the food turning acid or putrid. Now, if the action of the stomach, be weak, that is, not sufficiently powerful, food will not be properly digested.

Spices then are powerful stimulants, that is, they increase the action of the stomach, and are agree-

agreeable to it; such as the aromatic spices, *viz.* cinnamon, cloves, nutmeg, mace, pimento, &c. which are the produce of the warmer climates; but they are, at the same time, inflammatory, tending to increase the circulation of the blood, and bring on fever. We use mustard, onions, horse-radish, &c. for the same purpose. These stimulate universally, but are not inflammatory; because their powers do not continue long; whereas spices stimulate for a considerable length of time. Mint, thyme, sage, &c. parsley, fennel, celery, &c. are stimulants, but not so powerful as mustard, onions, &c. nor are they inflammatory.

Spices seem adapted to different climates, and different stomachs. In warm climates, and weak stomachs, spices are more wholesome than in colder climates, and stronger stomachs. In warm climates, the heat of the atmosphere upon the skin keeps up constant and great circulation there. The internal blood-vessels are, of course, empty, and the interior parts consequently weaker, *viz.* the stomach, &c. It requires therefore more powerful stimulants to assist digestion, and the natural weakness of the stomach prevents their inflammatory power. Hence, we may observe, that spices are more wholesome in summer than in winter; and that persons of luxurious life, who live without exercise, whose stomachs are, of course, weakened

ened and impaired, may eat them with greater safety than such as are strong, laborious, and healthful.

In colder climates, and with temperate livers, the stomach is naturally strong: very little stimulants, therefore, are required; inflammatory ones must, of course, do mischief. If any, then, are used; it should be those of the second class, *viz.* mustard, onions, horse-radish, &c. Nature seems here to have provided for herself; for we find spices only in warm countries: none grow naturally in cold ones. But the second class is principally natives of cold climates. If any of the spices are made to grow in a cold climate, part of their stimulus is lost; and if the second class of stimulants are made to grow in a warm climate, it is the same. Pepper grown here loses its stimulating powers; and an onion grown in Spain, is not so strong as one, the produce of England. They seem destined then for particular climates. In hot countries, therefore, spices are necessary; but in colder ones they are prejudicial. If the stomach then be weak, which, in time, will disorder the system, it may be proper, to use spices, but, if not weak, on no account, to use them; for they have sometimes done so much harm, as totally to destroy digestion, where great quantities have been constantly thrown in with the food.

A little spice, used with the most flatulent vegetables, is frequently, serviceable, as by encreasing the action of the stomach, it brings on digestion, before that fermentation takes place, which in weak stomachs, would be attended with extrication of air. Thus, we use pepper with greens, peas, &c. to correct what is called their windiness; and we use pepper with broth, to coagulate the fluid more firmly, and correct it's putrescency, both which are brought about by the action of the stomach. Lemon-juice, barley, &c. is often added to broth, for the same purpose. So we eat mustard with salted pork and beef, salted fish, &c. in order to assist digestion, by encreasing the action of the stomach; salted provisions being more difficult of digestion than such as are fresh.

The second class of substances to assist digestion are acids. None but the native vegetable acid, *viz.* the juice of sour fruits, is capable of affording nourishment; nor would this, if pure: it is owing to the mucilage mixed with it, that it nourishes. Acids then *assist* digestion merely.

Acids produce many effects. In the first place, they stimulate the glands of the stomach, creating by their stimulus that sensation we call hunger.

hunger. Digestion being considerably affected by the appetite; if there is no appetite, though the stomach be strong, there will be no digestion. We frequently then employ acids, a little before meals, to create an appetite. Thus, in hot countries, where, owing to an increased circulation in the skin, the internal circulation is diminished, and, of course, the stomach weakened, the inhabitants accustom themselves to the drinking of beverage or lemonade before dinner, to increase their appetite.

Acids also promote secretion of the glands of the stomach, so as to supply the food with a watry menstruum; that is, a fluid proper, and sufficient, to promote fermentation.

They act also as sedatives or quieters of the rest of the system, taking off that stimulus occasioned by digestion. Hence they are beneficial in warm climates, and in weather where the heat naturally stimulates the system, and that stimulus is liable to be increased by digestion. Hence, as we said before, fruit is exceedingly wholesome in the summer, and at certain times, if taken in moderate quantities.

Acids tend likewise to coagulate animal solids

and fluids; and, assisted by the coagulating fluids of the stomach, they take off the viscosity of food. Thus we use lemon or vinegar with fish, particularly shell-fish. Indeed, shell-fish should never be eaten without some acid; they being, as was before observed, in their nature, so remarkably viscid, and, of course, prejudicial to the constitution. It is for the same reason, that we use acids with veal, lamb, and all young animals; namely, to correct their viscosity. Of all acids, vinegar, provided we attend to it's quality, is the safest.

Acids check also vinous and acetous fermentation; that is, such fermentation as should by no means take place in the stomach. It is for this reason we use them with substances of loose texture, that are apt to turn sour in the stomach, and become flatulent and windy. Thus we eat vinegar with sallad, and greens of all sorts. So, in all weak stomachs, where food is apt to turn sour, and cause heart-burn, the use of acids has been found to correct and take it off. It is on this account, that fruit has been introduced after meals. Acids then are useful for many purposes in digestion; but, taken in too great quantities, they are hurtful, as they will produce a disposition to flatulency, pain, and weakness, in the stomach and bowels,

bowels, which is afterwards cured with difficulty.

The next substance, in general use with food, is salt, which affords no kind of nourishment; neither will it digest, but passes through the body without any change. It is, however, universally used where it can be got; nay, all animals prefer food that is saltish to such as is not. This general instinct, we should suppose, would not be given, but to some purpose; yet it is difficult to say of what use salt is, in digestion. It stimulates the glands of the stomach, and promotes secretion of the watry menstruum; but of what other use it is, we know not.

We often preserve food with salt; and thus preserved, it is considerably more difficult of digestion. The fibres are hardened, they are not so readily dissolved, and they go through the proper fermentation of the stomach with difficulty. Thus it is, that we cannot live so long on salted provision as on fresh; for, as we before observed, the salt does not penetrate thoroughly into all parts of the meat; therefore, when in the stomach, before fermentation takes place in the outer parts, the inner will putrify, and, by infecting the fluids of the body, bring on the scurvy, as we see

it does, in persons upon a long voyage. And yet salt may be used, in the greatest quantity, so as to prevent putrefaction of food, without rendering it totally unfit for nourishment.

Oil is another substance that may be used to help digestion, it taking off the viscosity of food. Hence it is, that we eat sallad, with which oil has been mixed, with the meat of young animals, as with veal, lamb, &c. and (with some kinds of fish) which, from it's glariness, tends much to disturb digestion. Oil also takes off the disposition in loose vegetables to ferment improperly, and thus prevents flatulency. It is for this reason, we use it with sallads, greens, &c. But oil, in weak stomachs disposed to acidity, is apt to produce sourness in the stomach, and bring on heart-burn, sickness, vomiting, and purging. Why it should have these contrary effects, we cannot say; but experience shews it to be true.

Sugar is another assistant of digestion, by preventing the bad effects of some food, and affords considerable nourishment in itself. A diluted solution ferments more readily than a more concentrated one; that is, the more water you put to sugar, provided you exceed not certain bounds, the more readily it ferments. Sugar mixed with
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a certain quantity of water, presently becomes vinegar. Now, the looser vegetables and fruits, such as sallad, currants, cherries, &c. contain in them a more diluted solution of sugar than the firmer vegetables, or the sweeter fruits. It is on this account, that we frequently eat sugar with them. Another reason, why we eat sugar with such vegetables, is to take off the ascency and flatulency which they are apt to run soon into, by rendering them more difficult to ferment. Sugar also corrects the putrescency of animal food; but not so much as vegetables do. For this purpose, it was much used in England, before kitchen-gardens became general.

It is not above 150 years since greens, and other vegetables were imported from Holland, (a kitchen-garden then being a great curiosity.) Salted meat at that time, was much eaten, and the sea-scurvy was very general. Persons were then accustomed to eat sugared mutton and sugared ham. At present the custom is not so much abolished, but that we eat sweet sauces with various kinds of food.

Sugar has been said to spoil the teeth*. This

* It is a well known fact that refined loaf sugar contains a considerable quantity of lime, and he that doubts whether lime will destroy bone of any kind may easily ascertain the fact, by

observation may, in some cases, be just; as, where the teeth may have a more than ordinary degree of sensibility; or it may, perhaps, by sticking about them, and turning acid, corrode them; but faults of this kind are oftener imputed to it than it deserves. Preserves are far from unwholesome,—and pickles may be considered as sponges filled with vinegar.

Having thus entered into the several properties of eatables, let us now proceed to drinks.

Water is necessary to digestion and nourishment. For there are salts constantly forming in the blood, besides such as are thrown into it by the stomach: whoever has accidentally tasted their own blood, will be convinced of this, by its saline taste. There is always also, a small part of the blood, in some degree, putrifying. Now, if these salts and this putrescency were accumulated to any great degree, it would prove fatal. Water, then, is necessary to wash away these salts,

experiment. The natives of Savu, an island in the Indian seas, not far from Batavia, accustom themselves to chew beetle, which they mix with a kind of white lime, made of coral stone and shells. This composition makes the teeth not only as black as charcoal, but as rotten too, corroding them as rust does iron; a proof that lime, or any substance containing lime, is pernicious to the teeth.

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and this putrescency. Besides, the saliva and natural juice of the stomach is not sufficient of themselves to dissolve the aliment, and carry on fermentation. Water then is a great assistant. But pure water is not so proper for either of these purposes; for water will run off too soon; that is, it will not remain mixed with the food long enough to go through fermentation with it; neither will it alone carry off the putrescent or saline substance in the blood. Mixing mucilaginous matter with it, as in wine, beer, cyder, &c. enables it to answer these purposes. Thus, we see the saliva or spittle which nature provides, is a viscid fluid, or a mucilaginous one.

Wine, being in a state of fermentation itself, tends to forward fermentation in the stomach. For any substance going through one fermentation, generally forwards fermentation in another. Accordingly we find that persons, accustomed to drink weak wine, cannot digest their food with water alone, but will have eruptions on the skin, during the time that their meat is in the stomach. Besides, wine is as necessary to a weak stomach, as spices; for if it be not too strong, nor taken in too great quantities, it stimulates the stomach, makes it contract freer, and thus forwards digestion. In warm climates, the inhabitants could not
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preserve their health without it; the heat of the weather keeping up such a circulation of the blood on the surface of the body, as to weaken the internal parts, and render digestion difficult. Accordingly we find, that nature has provided them amply with the means of procuring wine. Hence it follows, that a glass of wine, occasionally taken in summer, is more beneficial than one drank in winter; as the one helps digestion, while the other tends to destroy it.

Was man to live the life of a savage, water would be a sufficient drink; as eating only a small quantity, and using great exercise, his digestive organs would be much stronger, and sufficient for digestion without any other assistance: but according to his present method of living, eating daily too much, and taking little exercise, he requires wine. However, the wine should be diluted with water; for was it to intoxicate to any degree, it would overthrow the design for which it was taken, prevent the stomach from eating sufficiently, and interrupt digestion going on. By wine here, we mean all vinous liquors, as wine, cyder, ale, small beer, &c.

If we drink pure water, it will find it's way out of the body by urine or sweat, without carrying any

any of the saline, or putrescent parts of the blood with it ; but if we use mucilaginous fluids, as wine, beer, &c. they remain some time in the blood, mix with the saline and putrescent substances of it, and gradually carry them off. Water then, is the necessary drink, but it is much helped by brewing; that is, wine, beer, &c. if moderately taken, as we have mentioned, is the best liquor we can use.

Having said so much upon the nature of digestion, and the property of food in general, let us run over them again a little more particularly ; and first, let us speak of fruits.

Stone-fruits, in general, are of a soft lax texture, and their juices dilute ; by which means, they are easily dissolved in the stomach. It is for this reason, they are apt to be eaten in large quantities ; but hence, as they are more liable to fermentation than any other, and produce a copious acid, they are apt to irritate the intestines, and bring on purging and vomiting. Apricots and peaches are less noxious than either the cherry or the plumb, being sweeter and richer ; the latter fruit is, in general, the richest.

Apples and pears being of a firmer texture,
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and containing a less active acid, are not so liable to a noxious fermentation as the stone-fruits, and will continue longer in the stomach; and of these, pears are more wholesome than apples; for the pear being specifically heavier than water, will sink to the bottom of the stomach, and be sooner digested; while apples, swimming near the top, will elude the action of the intestines, and by irritating the left orifice of the stomach, will often produce uneasy symptoms.

Strawberries and raspberries are of a very tender texture; therefore easily dissolved, passing off, before a very active fermentation can take place, which is likewise prevented by their sweetness. On all these accounts, they are very innocent.

Currants are an acid fruit; have very little sweetness; of course, very little nourishment, and are liable to all the bad qualities of stone-fruits.

Gooseberries are much sweeter, more nourishing, and more innocent; and without the husks, are very easily digested; and on account of their sweetness, less subject to active fermentation.

Grapes are a richer fruit, containing a great quantity of sugar, on which account they are
more

more nutritive than any we have mentioned; and if eaten when perfectly ripe, and in moderation, are innocent.

When we apply heat to these fruits; that is, when we bake or boil them, we change their qualities, dissipate their active acid, and dispose them less to ferment. Hence, universally, baked or boiled fruits are safer than fresh. It is to destroy their disposition to fermentation, that we frequently eat them with milk or cream, whose oily nature produces that effect. Wine is also used to obviate the bad effects of fruit; but this depends upon its spirituous part, and therefore pure spirit, were it not otherwise noxious, would be most eligible. If wine be used, it should be strong and mellow. Another method of using them, is with sugar. This surely renders fruit more nutritive; and to sour fruits, must be a judicious addition. Sometimes we use oily matters; as butter in apple-pye. This, from its anti-fermentative quality, is a proper addition; but in weak stomachs, is apt to produce heart-burn, &c. It is safer to eat the mild fruit before meals; the sour fruits, after.

We come next to the herbs. Beet and spinnage are watery and insipid; they contain but
little

little sugar or mucilaginous matter; and, of course, afford but little nourishment, On account of their little acidity and loose texture, they are less flatulent than some of the other herbs.

Dandelion, endive, lettuce, are all of them milky plants; and it is almost a universal rule, that those which afford a milky juice, are remarkably acrid, and many of them poisonous; but these I have mentioned have been excepted; however, they are all opiates, in some measure, when old; for this reason, we only use them when very young, and we blanch them, to free them of their acrimony, which is done by tying them up, and thus depriving them of light. They are flatulent; and, as such, should be never eaten without pepper, or something to answer the same purpose.

Cellery contains a poisonous acrimony; on which account, it is blanched for use, though it is never wholly deprived of it's acrimony in this way; boiling does it more effectually, and gives it a mucilaginous sweetness; consequently, it is most wholesome in broths, and that in the summer, when the stomach can bear stimulating most.

Asparagus is only wholesome when in an intermediate state, between root and plant: when old,
it

it is remarkably acrid; but when young, it is sweet and mucilaginous.

Artichokes, if young and boiled, are of a tender texture, easily digested, and not flatulent. They are sweet, and of course, remarkably nutritious.

Mushrooms are very nutritive, and much a-kin to animal food; that is; they resemble meat in their properties; and as such, may be eaten by strong persons in considerable quantities. The morelle and truffle are of this kind: but on account of their stimulating powers, are more used as a fashionable ornament to our dishes, than as any proper food.

The next to be considered, are our esculent roots. The radish, as being so acrid, is used only as sallad, or after meals to help digestion. It is most wholesome when scraped. The turnep is, at best, when deprived of it's acrid rind, but a watry weak nutriment, very flatulent, or windy; and, if eaten in great quantities, will purge.

The carrot and parsnep, from the sweet mucilaginous matter contained in them, are very nourishing;

rishing ; but the carrot more than the parsnep, as containing the greatest quantity of the two.

The leek, the onion, and the garlic, are in their recent state, acrid but innocent. When by age or climate, this acrimony is too great, we do not use them as food. When boiled, this acrimony is destroyed, and a remarkable mild substance remains, very nutritious, especially to those who can digest them raw.

But of all the culinary herbs, potatoes are the best ; they, containing a kind of flour, are, on that account, very nourishing, and less flatulent, than any, consequently very wholesome. The more mealy they are the better.

The next in order are peas, beans, French beans, &c. these contain a degree of oil and sugar mixed, consequently afford pure and strong nourishment, as appears from experiments made on domestic animals, *viz.* hogs, &c. But, as they are of firm texture, and not easily digested, their use in food should be confined to the hardy and robust. They are more flatulent than most vegetables, therefore improper aliment for weak stomachs. When eaten young, before they come to be ripe, they are indeed less flatulent, on account of their not
having

having attained the oil they afterwards gain; but then their nutriment is proportionably diminished. French beans being eaten in their pods, are not so flatulent as the other two, and peas, either ripe or not, being of a more tender and soluble texture than beans, are not so often eaten. The pea is used for culinary purposes, as puddings, &c. &c.

So much for vegetable food; let us now consider the particular sorts of animal. And first, with respect to beef and veal. Were we purely to consider the tenderness of texture, the youngest animals certainly would be always preferred; but when we talk of them as nourishing food, beef is, for the reasons I have mentioned, more nutritive than veal: for when an animal is very young, we commonly have an aversion to it. The whole of it then is, as it were, a semi-fluid mass, which we cannot take, in sufficient quantity; and which, from it's watry consistence, must be but little nutritious. It is the same with respect to mutton and lamb, venison and fawn, pork and pig, &c. Mutton has commonly been preferred to all the fleshs of quadrupeds; and indeed, besides it's being more perfect, has the advantage over them of being more generally suited to different climates. Beef requires a very nice inter-

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mediate

mediate state, rich pastures and temperate air; which it seems to enjoy chiefly in this country: whereas sheep can be brought to almost the same perfection in the bleak northern, as in these mild southern countries.

Hare, being an animal much exercised, acquires a firmness of fibres, and is difficult of digestion; and when killed, after a long chase, when much of the oil of the body is absorbed, it's muscular parts are much firmer and tougher than when killed in the seat. The rabbit, being of very little exercise, is one of the white meats, without viscidities, and is one of the lightest and most digestible foods in use.

With respect to the hog; it, being the only domestic animal we know, of no use to men when alive; is therefore properly designed for food. Besides, as loathsome and ugly to every human eye, it is killed without reluctance. Pork is of very tender structure, increased, perhaps, from a peculiarity in it's nature, *viz.* taking in fat more readily than any other animal. Pork is a white meat, even in it's adult state, and then gives out a jelly in very great quantities; and on account of it's tenderness, &c. is very nutritious.

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The next class of animal food, is that of birds ; of which there are several kinds. The cock, hen, chicken, and capon are entirely domestic, there being no country in which they are found wild. They take little exercise, and live mostly on vegetables ; hence they are food of a tender structure, easy of digestion, and, as a white meat, gelatinous. When very young, they are extremely viscid ; when old, tough and ligamentous : so that the proper time of using them is in a middle state, between these two extremes ; that is, when about a year old. Such as eat them younger, eat them when unwholesome. Now, a barn-door fowl is far preferable to one that is crammed ; as exercise is necessary to give perfection ; for by this means, the fat of the animal is equally dispersed through the muscular parts ; whereas, when the bird is fatted hastily, the fat is accumulated in particular parts.

Turkies are of the same kind with the cock, hen, &c. equally tender, and equally easy of digestion. With respect to wild-fowl ; such as the pheasant, the grouse, the partridge, and the quail, they approach in their nature to the tame fowl ; but are of a higher flavour, are more tender, and rather easier of digestion.

We come next to water-fowl. Of these, the duck, both wild and tame, contains a great deal of essential oil, and will not so readily digest in the stomach. However, the wild-duck, from it's being much exercised, being generally carnivorous, is more soluble than the tame duck, and, of course, easier digested. The tame goose is manifestly less viscid than the duck, but is of a firmer texture. Digestion, with regard to this bird, is not so constant; it depending on the disposition of the stomach. But the teal, though much of the nature of the wild-duck, is the most tender and savoury, the least viscid, and the most wholesome of this kind.

The next class of aquatics, are the woodcock, snipe, the grey and green plover, &c. of which the woodcock and snipe, although they live chiefly on insects, are of a tender structure, approaching to the white meats of the cock and hen.

I have given the reader to understand, that exercise produces firmness. An opportunity now offers to illustrate it. The woodcock is obliged to fly much about, while the partridge walks more and flies less. Hence, it is observed, that the wing of the woodcock is always very tough, while that of the partridge is very tender; and,
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on the contrary, the leg of the woodcock is very tender, while that of the partridge is very tough. Hence the old doggrel distich :

“ If the partridge had but the woodcock’s
thigh,

“ He’d be the very best of birds that fly.

With respect to pigeons, another class of birds, they are, in their nature, hot and alkalescent, that is, very much disposed to active fermentation in the stomach : and perhaps, more so than any other bird of this kind that lives on grain. We attribute this to much exercise. When young, they are tender and easily digested. As to smaller birds, *viz.* the lark, the thrush, &c. there is probably a difference according to their exercise and food, but it will be sufficient to say, that, when taken at a proper age, they are tender, juicy, and wholesome.

We have a good opportunity here to mention eggs. It is obvious, from their nature and use, in the nourishment of the foetus, that they contain a larger proportion of pure nutriment than any other food. Notwithstanding this, eggs are not of easy digestion ; and, from the proportion of

ment they afford, cannot be eaten in any large quantity.

We will now proceed to fish : but first let us mention the turtle, an amphibious animal, now become a great delicacy. From some particularities in it's œconomy, from it's little motion, and it's living on vegetables, it is of a very gelatinous nature, and highly nutritious.

The texture of fish, in general, is more tender than that of flesh. They have nothing of a fibrous structure like flesh ; of course, they are easier digested than meat, especially such as are not of a viscid nature. We have had occasion to say something on the different kinds of fish before, as indeed, we have on most sorts of food ; but as it is a matter in which mankind are highly concerned, it may not be unnecessary to be a little more particular.

Those of the salmon kind, as the sea-salmon, the river-trout, the smelt, the charr, &c. are of a tender substance, sufficiently juicy and nourishing ; but, like other fish, they are heating, and apt to breed humours in the skin. The salmon-trout is undoubtedly more stimulating, and less gelatinous than those of the white kind.

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The next class, such as the barbel, the carp, the gudgeon, the tench, the chubb, the roach, the bleak, and the bream, is drier, and less tendinous; less strong and heating; and of a nature less gelatinous. The perch is something of this kind, of a firm texture, but tender substance, easily digested, neither glutinous, heating, or remarkably stimulant.

The next class is sea-fish, and that of the whiting, the haddock, and the cod. These give a gradation in tendernefs, glutinosity, and stimulus to the whole system; the cod being the firmest, most viscid, and most heating of the three.

The lump is a remarkable viscid fish, approaching in quality to the eel, and exceedingly nutritious to those who use it. The mackarel is of a drier substance, and less nutritious. The mullet is between the carp and the haddock; less dry than the one, and more juicy than the other. The pike, though rapacious and carnivorous, is dry, and, in some degree, oily, and one of the least heating of any we take in.

Another class, is that of the herring, the sprat, the anchovy, and the shad; which are of an oily,

juicy, nutritious nature, in their heating quality next to the salmon, stimulating the system and quickening the pulse to a considerable degree.

The next class is that of the flounder kind, *viz*, the common flounder, the sole, the plaice, the turbot and the holibut. These are all of a tender, oily, juicy nature, more viscid than the preceding class; but less so than the following. They are set down according to their qualities; the flounder and sole more tender, the turbot and holibut more viscid.

The last is the eel kind, as the sand-eel, the common-eel, the conger-eel, &c. These are of the same quality with the viper, viscid, nutritious, and difficultly perspirable; by long retention in the stomach, heating and oppressive.

With respect to the crab, the shrimp, and the lobster, they come under the name of insects: they are of a nature, that if boiled, will give a jellied broth, and are apt to stimulate the system very much, producing heat, anxiety and fever. As to oysters, they are nutritious, and though long retained in the stomach, as little heating to the system as any. The muscle, they say, is poisonous; but where the poison resides, we cannot tell:

tell: the ill effects sometimes on eating them, must proceed from their viscosity.

Upon the whole, we beg it may be understood, that what has been said respecting foods, holds good only in general. Difference of constitution will produce different effects. Thus, according to the old adage, "What is one man's meat may be another man's poison." If persons are so rash as to determine the quality of any particular food to be good, because it agrees with them, it is in vain saying any thing to them upon the subject: what is wholesome to-day, may be injurious to-morrow; and, though at present they find no ill effects from the use of certain things, they may lay the foundation of diseases, and unhappily experience them later in life.

But before we dismiss this subject, we must take notice of the use of coffee and tea. Much dispute has arisen about their virtues. One would imagine, frequent experience would long ago have silenced such disputes. Their effects are, undoubtedly, very much mixed, depending on the warm water. The virtues attributed to them, such as assisting digestion, relieving the stomach from a load of food, from crudities and from
head-

head-achs arising from them, promoting the secretion of urine, and perhaps of perspiration, may be all fairly attributed to the warm water. The same also will have the effect of keeping from sleep. Tea, it is known, weakens the tone of the stomach, by frequent use; debilitates the system, in consequence, and brings on tremors and convulsions. The same effects are not so remarkable in coffee; but still experience shews it to be of the same nature. Coffee contains a great quantity of oil, of a binding quality, that corrects putrefaction. It is found to moderate fermentation in the stomach, and to be a powerful quieter of the system; that is, it will decrease the force and circulation of the blood, and take off the quickness and fulness of the pulse; or, in other words, it will often abate a slight fever. For this reason, it is recommended in a morning for a head-ach, which it will frequently remove. So far, indeed, taken medicinally, it may be useful; and as it assists digestion, one dish may not be injurious to those who sit long after dinner, and who have strong constitutions; but in delicate habits, it often occasions want of sleep, tremors, and many of those complaints called nervous. *Newmann* obtained by distillation, from one pound of coffee, five ounces, five drachms and a half of water; six ounces and half a drachm of thick
foetid

fœtid oil, and four ounces and two drachms of earth. In short, we may conclude, that coffee and tea, however their effects be varied by habit, or particular constitution, certainly weaken the tone of the system, and diminish the force of the nervous power.

Having now treated fully of the several kinds of food, we will next consider the quantity, time, and order, necessary to be observed in taking it: for health depends as much upon a proper attention to this, as to the food we eat. And, in this, let the palate or inclination, be first consulted. Nature has endowed the stomach with such sensibility, that, in health, if strictly attended to, she will, in general, call, e're long, for that which is proper, and reject or loath that which is improper. It is this natural longing that has frequently pointed out, in disorders, food, which, without the assistance of medicine, has often recovered the patient. Eat then, by no means, that, for common food, which you dislike. *Paulo pejor sed suavior cibus & potus meliori ut ingrato, præferendus.* Agreeable food, though it be rather worse in quality, is preferable to that which cloy, be it ever so good.

In the next place, examine your stomach. Never eat any thing that lies heavy in it, or rises
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in it; any thing that is long in passing off, or any thing that is flatulent or windy, that occasions belchings, heart-burn, gripes, or fluxes; these being sure symptoms of improper digestion; the consequence of which is bad. If therefore, from a depraved appetite, you should long for such food as you experimentally find to disagree with you, by no means indulge it. By a resolution to withstand such temptations, we may keep off a number of disorders: for digestion is the forerunner of half the diseases we are liable to.

Another thing to be considered, is the choice of food, whether such meat as you wish for, be in season or not; for that which at one time of the year is good, may, at another, be hurtful. For example, pork, during the winter, is wholesome, but in summer, it is not fit to be eaten. Our taste will guide us in this; as much difference as there is in taste, between a thing in season and out of season; so much is there in the goodness, and of course, in it's wholesomeness.

It has been long a custom to keep meat a considerable time before we dress it, under a notion of it's becoming more tender and easy of digestion. They say, when putrefaction has begun to take place in meat out of the body, it will the
sooner

sooner break down in the body. This may probably be the case: but what it acquires in tenderness, it loses in it's nutritive quality. It is not sufficient that your meat does not stink, the spirituous part of it must be preserved, that which gives lively and pure nourishment; meat, therefore long kept, is not so wholesome as that which is fresh killed. With respect to digestion, it goes on sufficiently soon in a healthy stomach, whether the meat be tough or tender. It is not meant to say that all meats are sufficiently soon digested; it has already been shewn to the contrary; but what is meant, is, that in meat of the same kind and age, it is of no great consequence to the eater, in point of firmness, whether it be tender from being long kept, or tough, from being dressed, when fresh killed.

Custom is another thing to be considered in the choice of food. What we have been longest used to, generally agrees best with us. Change of diet is apt to cause some alteration: therefore when a new diet offers itself, as upon change of places and countries, we should at first be sparing; upon further use we may be bolder. Nay, even, with those to whom a change of diet becomes necessary, it should be brought about by degrees.

Nulla

Nulla subita mutatio est bona. No sudden change is good.

The next thing we should study, is the quantity. Temperence and moderation in eating, is nature's great preservative. *Plures gula quam gladius*—the throat has destroyed more than the sword. Some are apt to think, the more plentifully they eat, the better they thrive, and the stronger they grow. But this is not the case. A little well digested, will render the body more vigorous than when it is glutted with superfluity, most of which is turned to excrementious, not alimentary fluid, and must be speedily evacuated, or sickness will follow. Our stomach is the best judge in such cases. We should never eat to satiety or fullness, but desist with an appetite. Thus shall we be refreshed, light, and cheerful; not dull, heavy, or indisposed. No certain quantity of food can be prescribed as a general rule: what is convenient to one, may be too much for another, and too little for a third. A strong, labouring and active person may eat more freely than the weak, the studious, and sedentary, or such as take their ease: indeed, the active require greater supply. By our loading the stomach, fermentation is checked, and, of course, digestion impeded; for the natural juice of the stomach has not room to exert

exert itself; it therefore nauseates it's contents, and is attended with belchings; the spirits are clogged, obstructions ensue, and fever is the consequence. Hence arise various ill symptoms, and depraved effects throughout the body, enervating the strength, decaying the senses, hastening old age, and shortening of life. Though these bad effects are not instantly perceived, yet they are the certain attendants of intemperance; for it has been generally observed in great eaters, that (though from custom, a state of youth, and a strong constitution, they have felt no immediate inconvenience, but have digested their food, suffered no surfeit, and bore their immoderate diet well) if they have not been unexpectedly cut off, they have found the symptoms of old age come on early in life, attended with pains and innumerable disorders. In winter, indeed, we may eat more freely than in summer, because the stomach is stronger, for the reasons I mentioned before, the circulation of the blood not being increased by the heat of the weather, on the external parts of the body: but both in winter and summer, we should feed with moderation: and, if we value our health, make it a rule to rise from table with an appetite. Should we ever be attempted to eat too much, at one time, we should eat the less at another;

another ; that is, if our dinner has been larger than ordinary, let our supper be the less, or if possible, none at all ; for there is no man, however careful of his health, that in this matter does not occasionally transgress.

The next caution to be mentioned on this subject, are the hours of eating. Let not the common custom of meals invite you to eat, except your appetite concur with those times. A sufficient distance between hours of eating should be ever observed, lest we charge the stomach with a fresh supply, before the former be passed away ; for if any half-digested matter remains to be mixed with the next meal, it frequently occasions a foul stomach ; besides, the stomach, when empty, receives the food with delight, and will be eager and sharp in digestion ; and each part, as it passes along, will perform it's office readily and sufficiently. However, as some stomachs will digest their contents sooner than others, and if long empty, will naturally draw up from the intestines, putrid vapours, which will destroy the appetite, (for how often do we fast, till we lose our appetites ?) and greatly disturb the head and animal spirits ; (for the head, from the great quantity of nerves spread upon the stomach, readily sympathizes with it,) on these accounts, let such
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as feel a gnawing, as it is commonly called, within them, not wait till the stated hour of meals, but eat a little, that the stomach may have something to work on. Hence it appears, that there can be no general hour of eating. Children, with craving appetites, do, and may eat often. Young persons in health, that labour and use much exercise, may eat three times a-day, morning, noon, and night; but to such as are in years, such as are weak, as do no work, use no exercise, or lead a sedentary life, eating twice in the day is sufficient; or, persons weak and old, may eat often, but then it should be but little.

If persons confine themselves to two meals a day, one had better be a supper than a dinner, provided they sup early; because, during the hours of sleep, the body is composed, and at rest, and at this time, receives it's greatest nourishment. But late suppers are very offensive to the whole frame, especially to the head and eyes, from the vapours that arise from a loaded stomach. Our food should be tolerably well digested, before we lay down to sleep; and this is not well done under two or three hours. Our ancestors used to sup at six, and go to rest at ten. Hence they could comply with that well known advice, *After*

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supper

supper walk a mile, in order to quicken digestion, and dispose the body for rest.

We should not eat presently after exercise, nor when we are hot, but forbear, till the spirits are retired and settled. Neither should we come to meat, burthened with care or business; for owing to the sympathy between the brain and stomach, as was observed, by means of the nerves, a disturbed mind will impede the functions of the stomach. It is for this reason, we eat in company, cheerfully with our friends. Mirth and good company are great helps to a dull stomach, creators of appetite, and forwarders of digestion: and it is for this reason, that lively music has been introduced at feasts.

We should take care also to chew our meat well; for the saliva with which we thus mix it, is a great help to digestion; besides, in breaking it down with the teeth, we save the stomach the trouble: to eat greedily, therefore, and swallow our meat hastily, is not only indecent, but hurtful. With respect to drinking at meals, we should do it little and often, especially, if our food be dry and solid; great draughts cause fluctuation, and disturb fermentation.

Thus

Thus, having gone through the several properties of the various kinds of food, and shewn how far they are wholesome or not, and how far they agree or disagree with different constitutions; in order to complete this treatise upon health, we will proceed to consider the articles of exercise, rest, sleep, and evacuations.

END OF PART I.

A N

E A S Y W A Y

P R O L O N G L I F E.

P. A R T II.

HAVING, in the first part of this work, gone through the several properties of the various kinds of food, and shewn how far they agree or disagree with different constitutions, we proceed now, according to our promise, in order to complete this treatise upon health, to consider Exercise, Rest, Evacuations, &c. for let us be ever so observant of the former, unless we pay a careful attention to these, we shall not be able to keep ourselves well. We shall treat of them, therefore in their turns, and we will begin with,

EXER-

EXERCISE.

Now, in the human system, there is a certain quantity only of living power that can be produced for the health of the body; so, that if we exhaust that power, we debilitate or weaken the body. A man, for example, may walk, till he can walk no longer: it is, therefore, necessary to know how far Exercise is salutary; but let us first consider the great benefits procured by it.

Exercise increases the natural heat of the body, and thus excites and dilates the spirits, making them so far vigorous and active,

It empties the stomach and promotes the appetite for the next meal; for, as in sedentary habits, digestion does not quite clear the stomach, but leaves part of the food, which often clogs and disturbs it; exercise will excite this to pass away, and the stomach being thus discharged of those relicts, the appetite sharpens and craves food very strongly. This naturally strengthens the powers of the stomach, and we digest our next meal better,

It also excites an expulsion of excrements, not suffering any superfluous matter to lodge in the body.

It likewise opens the pores, and gives a free perspiration, which too much rest will shut up. Nature has appointed these vents, and secret ways of evacuation, to cleanse the habit of the body ; which in a little time would be clogged and become very foul and impure, by an accumulation of superfluous humours.

It, in the last place, promotes and adds greatly to the nutrition of the body. We find, by experience, that active, stirring people, have a fresher countenance, a greater flow of spirits ; nay, their flesh is firmer, and their limbs stronger, than what is generally met with in persons that lead a sedentary, idle, and sluggish life ; for it is a maxim universally known and received, that a frequent exertion of the original powers, in any one part of the body, tends to strengthen that part. For example, the legs of a dancer shall be strong and lusty, when his arms shall be weak and small ; and the arms of a blacksmith or waterman shall be muscular and powerful, while their legs shall fall away. The reason of this is very evident : exercise circulates the blood and nutritive

tive juices, gives them a free passage to all parts of the limbs so exercised, and drives off all superfluous humours, that, without it, would be destructive. But,

Such exercise is to be chosen, as suits best with the nature of each person's body, some requiring exercise of the upper parts most, others of the lower parts, and some equally of both; but that is generally most advantageous, that exercises every part, as dancing, fencing, riding, tennis, ringing, &c.

Now, whatever be our exercise, those whom good fortune has enabled to take it or not, would do well to attend to the following observations.

Exercise should be daily in the morning; always with an empty stomach; and, if possible, after excremental evacuation; for the heat of the body, opening the vessels, may otherwise draw foul humours into the blood and occasion very dangerous obstructions. For this reason it is not so well to take any extraordinary exercise upon a full stomach, or till the intestines are clear.*

* Though any great exercise after meals is injurious, to walk gently is exceedingly wholesome; for, by this means, our food will descend to the bottom of the stomach, the

Exercise should be varied according to your constitution and the season of the year. Young, strong, robust persons, in cold weather, admit of greater exercise; old, weak and thin persons, in hot weather, of less; for the fatter and grosser the body is, so much the more is the natural heat diminished, and exercise more necessary to dissolve the superfluous moisture of the body, which occasions grossness, and to increase the circulation of the blood. Circulation being naturally brisker in the summer, exercise is less needful, but more so in the winter, as the moisture of the season will sometimes occasion obstructions in the lungs and breast, which strong and laborious motion will often remove.

Exercise opening the pores, we should be careful not to use it in a damp air, lest we take in some of it's noxious qualities, that may do us

natural heat of the body will be increased, and digestion will go on the better. Where persons can retire after meals into the sweet air, and such delightful places as exhilarate the spirits, 'tis right to do so. If the state of the body be such, as that we cannot walk after meals, it will be right to stand up, at least, according to the old verse,

“ *Post prandium stabis, passu mollior meabis.*”

That is, stand up after meals, or walk gently.

harm;

harm; neither should we expose the body, after it, lest we catch cold; but these things are so well known, that they need not be further explained.

Another necessary caution to be observed, is, that exercise be not too violent, nor continued longer than it is a pleasure; but that we desist before we be weary, or sweat too much.

Those, who from age or infirmities are unable to take exercise, should rub their bodies, morning and evening, with flannel or coarse linen gloves. All parts may be rubbed, except the stomach and belly; rubbing these will disturb digestion and offend the head. We may apply a warm cloth to them in the room of it. The loins of the back likewise should not be rubbed, unless we feel them cold, and then but gently, lest they should be over-heated and obstructions in the urinary passages should ensue. In this operation we should begin softly and easily, increasing the motion and weight of our hand, as the tenderness of the skin will permit, till the flesh, as it were, swell and be somewhat ruddy, and then desist; for too much rubbing will bring on an inflammation. Was every person, well or ill, to rub themselves in this manner, once or twice a day, for a
little

little while, they would never omit it; for they would find themselves glow with a natural warmth, their limbs would be active and their joints supple. It is for this reason, that children are rubbed, who can take no exercise; and experience teaches us, that the currying and rubbing a horse, notwithstanding his exercise, is a great addition to his health. In cold and moist seasons the head also should be rubbed with a coarse linen cloth, warmed.

Thus having set out the times for exercise and motion, let us proceed to consider

R E S T.

Rest is as necessary to preserve health, and continue us in strength and vigour, as exercise. When the body is fatigued, rest is refreshing, and renews it's strength; but when fatigued with rest it thirsts again for motion and agreeable exercise. Rest is a burden, if forced upon nature longer than it requires. *Interdum quies, inquieta est*, says Seneca, even rest sometimes is irksome. For if exercise is necessary for the preservation of health, too much inactivity must be prejudicial. *Ignavia corpus bebetat, labor firmat*. Sluggishness makes the mind and body dull and heavy, whereas frequent motion strengthens and invigorates them.

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The life of man, conversant in change, spends it's whole course in sleep and watching ; the one appointed for rest and ease, the other for action and labour. If he was constant in the first, his life would be only the shadow of death ; if in the last, he would soon be exhausted. Nature therefore hath wisely contrived, that man should not long continue in either, but wear out his life between the two.

Sleep is a placid state of body and mind, giving refreshment and ease to both ; for as an exertion of the faculties either of mind or body exhausts our powers, rest will restore those powers. The powers of the mind are like a small current, which is sufficient to keep up a continual motion. If we want to give this water greater power, we dam it up, and when the water is run from the dam, if we wish to produce a fresh power, equal to the first, we shut the sluices, and collect the water again : so it is with the mind, in sleep. In perfect sleep, both the body and mind are at rest, excepting in those particulars, where an exertion is necessary to life ; and in sleep, it is that the body receives a greater degree of nutrition ; it is then digestion takes place in an extraordinary degree, and recruits
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those spirits that were exhausted in the course of the preceding day.

Now that sleep may prove advantageous, answering the intentions and designs of nature ; let us consider four things concerning it. The time when it should be taken ; the necessary limits, or quantity of sleep required ; the salubrity of the place, and the position of the body.

The time most proper for sleep, is, according to the appointment of nature, the night, when creation, in general, takes it's rest. At the shutting up of the day, when the sun gets below the horizon ; the spirits are not so active and lively, but incline to a cessation. 'Tis then they return to the centre of the body and apply themselves to what is called concoction ; that is, they return to perform their vital operations, to nourish and refresh the system. For during the heat of the day, they are dilated and extended to the external or circumferent parts. Hence, we find, that, towards midnight, unless we are in exercise, put on another garment, or increase the heat of the room, we always find ourselves chilly. In the morning again, at the rising of the sun, our spirits are naturally fresh, brisk and active. If we, therefore, pervert the order of nature

nature, turn day into night, by keeping late hours, and laying in bed, all the morning, we do that which is greatly destructive to our constitution. For as sleep naturally draws the animal heat inwards, and the heat of the sun counteracts this power, by drawing it outwards; sleeping in the day is a resisting of nature, which must be prejudicial to the health of the body. Sleeping in the day, therefore, is a bad custom, particularly for fat, corpulent people; but, if the spirits be fatigued with care or business, or by reason of old age, weakness of nature, extreme hot weather, labour, or the like; then, moderate day-sleep is a good refreshment, but take it rather sitting than lying down, because the head will be less offended with the rising vapours. Neither should it be taken immediately after dinner, but an hour or half an hour after, at least; and between dinner and our nap, it would be prudent to walk a little. Thus, will our food descend better into the stomach, and be less liable to affect the head. Neither should this afternoon's nap be longer than half an hour, or an hour at most; lest the animal heat should be so collected from the outward parts, as to cause a heaviness in the head: neither should it be taken in a hot place, but in a cool one rather, especially in summer-time, as shall hereafter be shewn.

Sitting

Sitting up late is one of the greatest destroyers of the constitution ; it tires and wastes the animal spirits, by keeping them too long upon duty ; weakens nature, hastens on the effects of old age, changes a fresh, florid countenance into a fallow one ; heats and dries the body, breeds rheums and bad humours, and is particularly injurious to thin people.

By going early *to* sleep and early *from* it, we rise refreshed, lively and active. Sleeping late in the morning, keeps that excrementitious matter in the intestines which ought to be evacuated and thus occasions obstructions and noisome vapours, which greatly offend the head, dull the senses, and are very pernicious to the whole body. If our necessities indeed oblige us to sit up late, our supper should be little, and we may make amends for it by laying an hour or two longer in the morning ; but let what will happen, we should always be up by nine o'clock.

In order that sleep may be peaceable and refreshing, we should be careful to go to bed with a free and quiet mind, and banish the thoughts of all manner of care and business. How often has a train of thinking disturbed a man's rest, and kept him awake the whole night ! The body
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and the mind is recruited in proportion to the soundness also of sleep. The more we dream, the less are we refreshed. Although rest is not complete at the beginning, it has a tendency to become so, during this state of the body ; that is, to a quiet mind, sleep becomes sounder and sounder. When a man first falls a-sleep, he dreams, tosses and tumbles about ; gradually he becomes more quiet, and were we to awake him, he would not recollect that he had been dreaming at all, or he would tell us, he dreamed, but in a small degree. During sleep the original power appears to be so much accumulated, as to give a disposition to action, both to the mind and body, from the slightest cause ; sleep then leaves us, and we awake : that is, when the powers are recruited, the organs begin to be affected, and the man dreams afresh ; at last, outward objects sensibly affect him and he awakes. 'Tis then the mind is fittest for action ; the judgment is then stronger, the imagination more lively, and as the evening comes on, these powers are gradually diminished, and require fresh sleep to recruit them.

The next thing that falls under our consideration, is the quantity of sleep we take. This has been in some measure noticed ; but it may not be unnecessary to be a little more particular. It
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cannot indeed be determined how long we may sleep; as in all other things, a mediocrity is best. Our sleep should be proportioned to our health, our age, our complexion, and the emptiness or fullness of the stomach.

As the nutrition of the body is particularly assisted by sleep, we should sleep, in general, till the food we take has performed it's office; that is, till what physicians call concoction is completed. This may be discerned on our awaking by the sensible lightness of the body, especially the head; the emptiness of the stomach, and a certain desire of evacuation, provided it is not unnaturally occasioned. Heaviness of the head and eyes, or a taste of our last meal, signifies that we have not slept a sufficient length of time. In short, six, seven or eight hours is long enough for young persons in health, but such as are sickly and weak require longer rest, nine, ten or eleven hours. Children and old men require more sleep, in general, than young or middle-aged persons; children, that their growth may the better be promoted, and old men, because it lessens the dryness of their constitution. The same reason holds good with lean people, to whom more sleep is necessary than to such as are fat; for sleep moistens
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and refreshes the whole system. In a word, as immoderate sleep, or sleep taken at improper times weakens the natural heat, loads the head with vapours, detains the excrements longer than is wholesome, makes men sluggish and heavy-headed, destroys the memory, and subjects them to the palsy, lethargy, &c. so too little sleep dries up the constitution, dims the sight, wastes the spirits, and destroys all the powers and faculties [both of mind and body. It must be observed, that we should not go to bed upon a full stomach; that is, not go to rest too soon after supper; but continue up an hour or two, till our food be half digested; if we are obliged to sup late, we should eat the less: for, on account of the natural heat of the body retiring inwards during the time of sleep, a full stomach will occasion a superfluity of vapours, and greatly offend the head. Besides, great suppers are very apt to occasion heart-burn, which will of course deprive us of our rest.

A matter occurs here; whether it be beneficial or not to have our bed warmed? Persons in years, such as are weak, and those who lead a tender and delicate course of life, do right to warm their beds, in cold and moist seasons of the year; and that for two reasons; that the body, on putting

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off our cloaths, may not be suddenly affected with the external cold ; and, as the inward heat of the body is much assisted by the warmth of the bed, concoction will be forwarded and the superfluous moisture of the body be the better consumed. But this custom is unwholesome to those persons who are healthful and strong, because it will very much weaken them.

When we arise in the morning we should find it amply compensate for our trouble, were we gently to rub our breasts and sides downward with our hands, and the rest of our body more strongly with flannel or a hot linen cloth, particularly our joints. Doing this will quicken the blood, strengthen the parts, and excite the natural heat. When risen, we should stretch ourselves out, that the animal spirits may be dilated to the exterior parts of the body, walk a little up and down, that the remaining contents of the stomach may more speedily descend ; this done, we should proceed to cleanse our nose, by blowing it ; to clear our breast, by expectoration, and to make every other necessary evacuation. We should wash and plunge our eyes in cold water, for this not only clears away the filth, but strengthens and preserves the sight. The mouth should be well cleansed with the same, and the teeth rubbed with

with a dry coarse cloth, after first scouring them with a sage leaf, dipped in vinegar. This will purify the breath, and preserve the teeth from foulness and decay: and last of all, the head should be combed, that the pores may be opened to expel such vapours, as were not consumed by sleep.

The next thing to be mentioned is the salubrity of the place we sleep in. A high room, dry, sweet, and well-aired, free from smoke, and remote from noise, is the most wholesome: neither should our chamber be hot, for the spirits and natural heat of the body, which is drawn inwardly by sleep, as before-mentioned, will be counteracted by an extraordinary heat in the room; but it should be moderately warm, and free from damp, either natural or artificial, arising from new plaistered walls, washing the floor or otherwise. It may not be amiss here to mention the danger of sleeping in the open air or on the ground, as many in the summer season do. Those whose stations in life oblige them to it, as soldiers, though for the present they escape the mischief, are frequently afterwards made sensible of the injury, by aches, stiffness or weakness of limbs, and many other infirmities that proceed from it.

Our beds may be soft, but should not sink in, as that will suck from the body, exhaust and impair our strength. A mattress upon a feather-bed is both easy and wholesome. As bedding receives the vapours, and sweaty moisture of the body, we should be careful that it is always clean, sweet, and well-aired; for, if it is not purified by air or fire, it will contract an ill scent and become unwholesome. If every one ought to be thus careful of the beds they constantly lie in themselves, we may see how necessary it is that travellers should be cautious how and where they sleep. No bed-chamber should be washed in cold, wet, or foggy weather; sweeping and brushing is sufficient to keep it decent, and airing it in clear, dry days, by opening the windows, will prevent it's becoming offensive.

As to the nature of our covering at night, it should be according to the season of the year. The head should be covered sufficiently to prevent it's taking cold; but not too warm, lest it weaken it and hasten grey hairs; for, if the vapours issuing from the brain are impeded in their passage, it will cause the hair to turn grey, much sooner than it otherwise would.

With respect to our manner of lying; we
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may, in a great measure, consult our own ease. The head should be higher than any other part of the body; the bed from head to feet, should be smooth and even, without any fall below the pillow, or hollow under the shoulders. Sleeping generally on the back is unwholesome, as the humours of the head naturally fall by this means into the hinder part of the brain and may disorder it, and the loins are thus more heated than they would otherwise be, and of course the urinary passages more subject to obstructions. Persons afflicted with the stone should by no means sleep on their backs. Sleeping with the back upwards may be occasionally good for such persons as are troubled with wind and have a weak digestion, the bowels being thus kept so much the warmer; but, to those who have weak eyes it is pernicious, as a defluxion of humours may thus fall into them. The most wholesome method of sleeping, is on the side, first on the left side, especially to those who go to bed before they have digested their supper, as the food will in this case better descend to the bottom of the stomach; and then on the right, that the motion of the heart may be freest from pressure. But the principal thing to render sleep comfortable, is, as was hinted before, to compose the mind. If we lie down with roving, troubled thoughts, they will

commonly call us up, before it is fit to rise, and our sleep will not be placid or refreshing. When we lay by our cloaths, therefore, let us lay aside our business, care and thoughts, and let not a wandering fancy break our rest.

It has been often doubted, whether it be good to sleep with the mouth a little open. Some there are that altogether deny it; but to sleep with the mouth open is certainly beneficial, and that, for these three reasons: because the breath passes more freely and the fuliginous fumes are better sent forth than discussed. Hence it is, that such as sleep with the mouth open, have a sweet breath, whereas those that sleep with it shut, have generally an offensive breath and foul teeth. The second is, because some bad moisture may in sleep pass forth at the mouth, which if shut, would fall upon the lungs and be prejudicial. The third reason is, because owing to the descent of rheums from the head, the free passage of the breath through the nose may be impeded, and snorings, and offensive routings ensue, that may disturb us of our rest, and awaken us.

But, because the tongue, palate and gums of such as sleep with their mouth open, are commonly afterwards very dry and covered with slimy

my matter, though in fact, those who sleep with their mouth shut are most subject to it, all persons in the morning, should wash their mouths and teeth well, and gargle their throats, and then every inconvenience is removed.

The only thing further to be enquired into, upon this subject, is whether sweating at night be destructive to the constitution or not. Great sweats are undoubtedly weakening, but light sweats are a great benefit, for gross humours are thereby dissolved, wind is disengaged, the blood is purified, the spirits are refreshed, the cramp, palsy, gout, swelling of the joints and other parts, aches, numbness and heaviness of the limbs are prevented, and consequently the whole body better preserved, lively, and in health. But, this caution must be observed, that the body be not suddenly after it exposed to the cold air. We will proceed now to

EXCRETIONS or EVACUATIONS.

All that the stomach receives is not fit to be retained; our food though studiously chosen and temperately used, is not all converted into the substance of the body; but some part of it is,

to be separated and sent forth; the rest is to supply and nourish. This regular course being continued, the body thrives and is in good order; but if that which should be evacuated, be retained, or that which ought to be retained, be injuriously passed off, the regular œconomy is subverted and the constitution suffers and decays.

The general excretions of the body are the stool or *feces* and the urine, and for ease and health they ought to be daily evacuated. If our habit be naturally lax, it is a happiness, provided that laxity be not immoderate; for such persons as are continually costive, and have seldom the benefit of nature, in the respect we are now talking of, are liable to many disorders. The *feces* retained longer than they ought, too often affect the head, dim the sight, occasion heaviness, dullness, and a degree of fever. 'Tis necessary therefore they should be daily evacuated. If this cannot naturally be obtained, the occasional taking of a little lenitive electuary will be very necessary.

Seminal evacuations ought also to be moderate. The sperm is a substance full of spirit, and if wilfully wasted, will hurt the constitution more than the loss of forty times the quantity of blood. Immoderate venery is known to impair the
strength

strength hurt the sight, consume the spirits, and hasten old age and death.

Cibo vel potus repletis, superflue evacuatis, sive exercitatis, coitus interdicitur.

Tempus optimum est mane & post dormias.

Hyeme & vere frequentius permittitur; æstate parcius.

Juvenes, sanguinei & pituitosi liberalius, parcius melancholici; parcissime biliosi, senes emaciati.

Although it has been an old saying, as foolish as common, *Qui medicè vivit, miserè vivit*; he that lives by rule, lives miserably; yet experience teaches us the contrary, and grounded upon pure reason and the contents of these pages: that he who pays no regard to the injunctions of nature, both shortens his life and destroys the comforts of it. In short, would you see without spectacles, go without crutches, or the help of a stick; would you lie easy in your bed, not telling the clock or wishing for day; would you eat with an appetite, and be *young* in strength when you are *old* in years: in fact, would you enjoy yourself, and every thing about you, and lengthen your life to the latest period; exercise your reason and attend to the advice here given, for

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Qui medicè vivit, sine medicis diu vivet.

He that lives by rule and wholesome precepts, is a physician to himself, and needs not the help of others.

Whence it is that some who are very hungry and have good appetites, eat little; while others, having little appetites, each much?

THIS proceeds from the difference of stomachs. A man, with a small stomach, that will hold but little, will be satisfied with a small quantity of food; whereas one, with a large stomach, though he seems not hungry, yet when he comes to his meal, will eat plentifully.

A stomach naturally cold, will crave more than it can digest. On the contrary, a hot stomach has but little appetite, for heat destroys it. Hence it appears, that a person, with a large capacious stomach, naturally cold, will devour an immoderate quantity of food: while one, with a small stomach, naturally hot, will at his meals eat little or nothing.

Whence

Whence it is, that the accustomed hour of eating being passed, we often lose our appetite.

BECAUSE the stomach being empty and hungry, draws up from the intestines putrid vapours, which destroy the appetite. And as these vapours not only annoy the stomach, but the head and spirits, such as are desirous of health, should at their usual hours of meals, if they find a craving for food, always indulge it by eating a little.

Cautions to be observed in the use of Drinking.

THE necessity and use of drink is to preserve natural moisture, and to make good a mixture and distribution of meat, that it may digest the better. For these reasons it should be moderately taken at meals. Sundry little draughts are more wholesome than two or three large ones. Large draughts at meals make the food fluctuate in the stomach. This with it's weakening and relaxing the coats of the stomach, destroys digestion. Great draughts also lessen the natural heat of the stomach, drive the food down too hastily, and corrupt the whole body with too great moisture and crudity.

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It will not be improper to mention here, that such persons as accustom themselves to taking soup the first thing at a meal, would do well to take it as hot as they can, as the heat will be very comfortable to the stomach. Taken lukewarm it would soon prove nauseous, though never so good. The drinking cold beer after hot soup or broth is an absurd and hurtful custom, for it counteracts the heat of the soup, destroys the tone of the stomach, and does mischief.

Drinking after meals, unless we are dry, is a pernicious custom, especially if we drink during digestion is taking place; as it destroys the natural heat that is working in the stomach. But after the food is passed off from the stomach, that is, three or four hours after the meal, a few glasses of wine, to a person in years, or of a cold constitution is beneficial: as it will cleanse the stomach of the relicks of the food, and create a readier distribution of the nutritive part of it, to the different parts of the body.

The utility of taking Physic in the Spring.

THE winter by it's moisture naturally fills the body with crude and excrementitious humours, and by it's coldness thickens and stagnates the same; and the approaching spring working on those humours, rarifying and dissolving them, they are apt to fluctuate and putrify in the body, which, unless by the force of nature, or the assistance of medicine, are often the cause of sickness.

Besides the uncertainty of the weather in spring, it's sudden alteration from hot to cold, and from dry to moist, will frequently produce feverish disorders, according to the disposition of the matter congealed as it were in the body during the preceding winter. Hence it happens, that people die more frequently in the spring than in any other season of the year.

Such persons, therefore, as are desirous to prevent these ill-effects, should take a dose or two of purging physick; especially those who lead a sedentary life: and the beginning of the spring is generally the best time for this salutary precaution.

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It is not necessary in general to take physic, by way of prevention, in the fall or autumn of the year.

Whether the losing of blood in the spring, be necessary for the preservation of health?

FOR such as are of a sanguine constitution, phlethoric and full of blood, it is beneficial, to prevent such dangers as a too great fullness of blood may occasion; but it is far better to lessen their blood by a sparing and cooling diet, than by opening a vein. For blood being the very essence of our life, diminishing it's quantity frequently, weakens the spirits and the constitution, and hastens death.

Whether the occasional use of cordials be prejudicial to the constitution?

WHEN used medicinally, in case of necessity, as when the stomach is weak, or lapsed by cold, a cordial may comfort and refresh it. But the immoderate, daily, or unseasonable use of strong liquors must be pernicious. Although they may please the palate, and sometimes not offend,

offend, but warm and refresh the stomach; yet, in length of time, from daily use, and perhaps in an improper season, they must destroy the temperature of the body, burn up the blood, and produce very dangerous symptoms.

Some observations upon Drunkenness.

IT is a maxim established upon good reason, that *every thing exceeding it's just bounds, is hurtful to nature*. The best of things are not excepted in this general rule. Even the necessary supports of life, if not qualified and made wholesome by this corrective, may prove the procurers of death.

Drink, when carried to excess, is no longer a refreshment, to moisten or water the thirsty body; nor a preservative; but becomes an inundation, to drown and suffocate the vital powers, and is the cause of sickness. It puts a man out of a state of health, and disorders him so much, that we may consider him as going to die.

It has been said by some ancient physicians, that to be drunk, once a month, is good physic and wholesome; as by overcharging the stomach it provokes vomiting, and so carries off what may
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be there lodged, that would otherwise breed disease; but this is a poor plea for drunkenness; that for the gaining one supposed benefit, (which might be obtained by other means,) we should run the risk of bringing on twenty disorders.

Drunkenness is certainly a disease, for it has all the requisites to constitute a disease, and is far distant from a state of health. For, if health be the free and regular discharge of the functions of the body and mind, and sickness a weak and imperfect discharge of those functions; then ebriety may properly be said to be a disease or sickness; it having the symptoms of an acute disease; for, during the time of drunkenness and some time after, few of the faculties perform their office rightly.

If we examine the intellectual faculties, we shall find the reason gone, the memory lost or bewildered, and the will strangely perverted.

If we look into the sensitive faculties they are also disordered; their functions impeded, or very defectively performed. The eyes do not see well, the ears hear well, nor the palate relish, &c. The speech falters and is imperfect; the stomach throws up it's contents, or nauseates; the

the legs fail, and the whole man is out of order.

Now, according to these symptoms in other diseases, we should judge the patient not likely to live, or we should deem his recovery very difficult. Surely then drunkenness, for the time it lasts, must be a very great disease. But because it does not in general prove mortal, or continue long, it is thought little or nothing of, and is considered as a trivial matter, that will cure itself.

But it may be asked, why drunkenness is not usually mortal, since the same symptoms in other diseases would be accounted so ?

To this we answer ; all the hopes we have that a drunken man should live ; is first, because common experience shews that drunkenness is not mortal ; secondly, from the nature of the cause, (strong drink,) which though it rage and strangely discompose the man for a time, yet it lasts not long, nor is it commonly mortal. The inebriating spirits of the liquor, flowing in so fast and joining with the natural spirits of the man, occasions a tide, so high as to overflow all the banks and bounds of order ; but these adven-

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titious spirits are so amicable and friendly to our bodies, in their own nature, as not to be equally deadly injurious, with that which is not so familiar. Besides, their being so very volatile, light, and active, nature much sooner recovers herself, than if the morbid matter were more solid, ponderous, and fixed. And, further,

These bad symptoms in other diseases are more to be feared, because they depend, perhaps, upon malignant causes; such as, by time, may be rooted in the constitution, or from the defection of some principal part; but the storm arising from drunkenness, as it is suddenly raised, so commonly it soon abates.

But though drunkenness be not mortal, nor the danger, perhaps, great for the present; yet drunken bouts frequently repeated, their reliëts will accumulate, weaken nature, and lay the foundation of many chronic diseases. Nor can it be expected otherwise; so that we may justly conclude, from the manifest irregular actions which appear to us externally, that the internal functions and their motions are strangely disordered: for outward madness proceeds from inward impulses and disordered motions of the faculties; which general disturbance must of course
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overturn the œconomy of nature, and consequently ruin the whole system.

The ill-effects arising from intoxication, are a changing of the natural tone of the stomach, a destruction of it's digestive powers, and degeneration of the nutritive part of our food. Common experience tells us, that, after a drunken debauch, the stomach loses it's appetite, and readiness of digestion, and, of course, nausea, belching, and thirst ensue.

Great drinkers generally acquire an unwholesome corpulency of body, or a lean consumptive constitution ; few of them escape. So great a dependance is there upon the stomach, that other parts cannot perform their duty, if this leading, principal part be perverted and debauched.

Now that different habits of body should arise from the same cause, is owing to the different disposition of parts : for, in some persons, although the stomach be vitiated, yet the strength of the subsequent digestions is so great, from the vigour of those parts destined to such offices, that they act strenuously ; though the matter on which they act be transmitted to them imperfect and degenerate, and do therefore keep the body

plump and full, although the juices be foul and of a depraved nature.

Others, on the contrary, whose parts are not so strong, lose the benefit of nutrition, and fall away. Hence it is, that by excessive drinking one man shall puff up, fill, and grow dropfical; while another pines away, and becomes consumptive.

A third injury, and a common one arising from intemperate drinking, is a weakness of the nerves, brought on by disorderly motions of the animal spirits. Thus we see the inconveniences and mischiefs attendant upon intemperance.

Drinking together is the pledge of friendship, and to be made drunk is the characteristic of a generous and hearty entertainment: for, most commonly, drinking concludes the feast. When nature has been tempted with varieties, and perhaps overcharged with them; the next folly is to disturb and inebriate the spirits, vitiate the fermentation, and precipitate the food out of the stomach by a flood of liquor, before digestion be finished; that if you have escaped a surfeit by eating, you shall not go away without a mischief
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by drinking; thus your good dinner is spoiled, and instead of being benefited by it, you are injured, and your friend's civility becomes your destruction.

But to the necessary uses of drink appointed by nature, we have invented others, and made it serve for pleasure, for profit, for wantonness, and debauchery. So that drink, which should help to support, nourish, and maintain the strength and vigour of nature, is made an unhappy instrument to abuse and injure the constitution.

However, as of drinking and drunkenness we have enumerated the evils, let us not be so partial as to smother the benefits.

Drinking advances the revenue of excise and custom. Makes barley bear a good price, and helps the farmer to pay his rent. It keeps the physician and apothecary in employ, and doubtless adds considerably to their business; and is the support of many a publican. But whether drinking ought to be promoted, to forward these advantages, with the destruction of health, the shortening of life, and the debauchery of the people; we leave the reader to judge.

OBSER-

O B S E R V A T I O N S

O N T H E

SMOAKING of TOBACCO.

TOBACCO is an herb of great antiquity and reputation among the Indians of America. It is also called *Nicotian*; but the name, Tobacco, was given it by the Spaniards, from an island on which it plentifully grew, and that of *Nicotian*, by the French, from one Nicot, who first made them acquainted with it. The Indians call it *Petun*, or *Petum*, which is indeed the best general name to give it, deriving it from the Latin word *Peto*, it being far fetched and much sought after.

It is an herb, hot and dry in it's nature, and, we believe of a destructive or venomous quality, for being taken any way into the body, it causes such a disturbance, as to occasion violent vomiting and purging, stupefying the senses and benumbing every part. These effects do not proceed from the temperature of the herb, but from the very essence of it. Common experience convinces

vinces us of it's stupefying quality ; for smoaking, to such as are not used to it, will bring on a drunken-like lightness of the head and, if persisted in for a length of time, will occasion a sleepiness of the whole system. Now, as the benumbing effect of a plant generally arises from the coldness of it's quality, and as Tobacco is of a hot nature, it is evident, that it's sleepy quality is not owing to it's temperature, but to it's very substance. However, there is in the juice of this herb a cleansing and healing property, and it is very effectual in the cure of any fresh wound, or old sore.

If it be objected by those who accustom themselves to smoke or chew tobacco, that they find none of these injurious qualities I have mentioned ; let it be considered, that it is owing to habit, for by a constant use of it, they in time render themselves insensible to it's effects, in the same manner as the Turks do, with respect to their chewing opium.

The Indians, from whom we learned the manner of smoaking, accustomed themselves to use tobacco, only, when they were much fatigued with labour or exercise, or when they wished to foretell things to come. For the smoke's lulling them to sleep

sleep and creating fundry dreams, on their awaking, they found themselves refreshed, and from their wandering thoughts during their insensibility, they fondly conceived, they could prognosticate the event of any business they took in hand, or any matter of importance they wished to know.

The method of using it was this. Having dried the leaves, they cast them on the coals, and with a cane received the smoke of them by the mouth and nostrils till they fell into a drunken trance or sleep, in which they continued three or four hours, according to the quantity of smoke they had taken in. After which they found themselves lightened and refreshed, and were able to return to their labour or exercise as before.

But we smoke tobacco for no such purpose; where one person takes a pipe medicinally, a hundred do it for pleasure to pass away the time. And as this is done indiscriminately at all times, and by all ages and constitutions, very often to the injury of health, a few observations upon this subject, can be no less profitable than pleasing.

Not-

Notwithstanding there is something injurious in the nature of tobacco, and it leaves a disagreeable smell and flavour behind it; yet it is beneficial to such persons as are of a cold, moist constitution, and troubled with rheums, especially in cold, damp weather, and when used moderately; for it will expel wind, dissolve and dissipate cold humours, raise the spirits, ease pains in the teeth, swellings of the gums, and aches of the joints; and, if the smoke be swallowed, it will speedily cure a surfeit, by causing a sudden evacuation both upwards and downwards. But to such as are not of a cold and moist constitution, nor affected with rheums, though it be only taken in at the mouth and immediately rejected, it is unwholesome, as it's heat will greatly affect the brain and disturb the animal spirits. As to swallowing the smoke, unless medicinally, or by way of physic, it is absolutely pernicious both to the stomach and the lungs, for it disturbs digestion and tends to dry up the soft and spongy substance of the lungs. If any one therefore has habituated himself to this idle practice, let him instantly leave it off, for though he may find no great inconveniences arising from it, while he is young and strong; yet he may be assured, when it is too late to repair the injury, he will discover that it has ruined his constitution.

There are two or three cautions to be observed by those who accustom themselves to smoking, which shall conclude the whole; one is, that in drawing the smoke, they take care that they suck it not suddenly into their throat or windpipe, as in such case it will much offend and disturb both the lungs and the mouth of the stomach. An other caution is, in returning the smoke from the mouth, to take care it does not outwardly affect the eyes, for it will do them a great deal of injury. A third caution, not to go abroad into the air for half an hour after they quit their pipe, especially if the season be cold or damp, for the tobacco will open the pores of the head, and the sudden access of the cold air may do a great deal of mischief. Hence we may see how idle and foolish such persons act, who walk or travel with a pipe in their mouths. In the last place, such as are of a dry, lean constitution, should shun the use of tobacco totally, for it's drying nature must be destructive to such habits.

F I N I S.

Fifteen RULES necessary to be observed, in
order to preserve HEALTH.

1. *Aërem purum suavesque odores spirare.*
2. *Cibum adversante stomacho non ingerere.*
3. *Cibaria ingrati & extranei saporis vitare.*
4. *Cruda, aut non bene coëta non gustare.*
5. *Cibos natura et coëctione multum discrepantes
eâdem mensâ non assumere.*
6. *Ad saturitatem nunquam edere et bibere.*
7. *Cibos boni succi et facilis coëctionis comedere.*
8. *Cibis naturæ et constitutioni convenientibus uti.*
9. *Somnum moderatum & tempestivum capere.*
10. *Motum corporis moderatum non negligere.*
11. *Ventrem modicè laxum habere.*
12. *Veneris illecebras ejusque usum tanquam pestem
fugere.*
13. *Melancholicos aliosque enormes animi affectus
fugere.*
14. *Corpus veris initio pharmaco convenienti purgare.*
15. *Vitam probam et in corruptam degere.*

Hæc qui servabit, corpus juvenile tenebit :

Hæc qui non servat, vitiosum corpus habebit.

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